



Municipal Separate Storm Sewer System (MS4) Year 3 Annual Report

2015 – 2016 Reporting Period

Permit No. VAR040057

In compliance with the "General VPDES Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems"



Department of Transportation and Environmental Services

2900-B Business Center Drive
Alexandria, VA 22314
703-746-4014

September 30, 2016



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**General VPDES Permit for
Small Municipal Separate Storm Sewer Systems
Permit No. VAR040057**

Year 3 Annual Report
July 1, 2015 – June 30, 2016

City of Alexandria, Virginia



Submitted by
City of Alexandria
Department of Transportation and Environmental Services
2099-B Business Center Drive, Alexandria, VA 22314

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CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

William J. Krabak
Name

DEPUTY DIRECTOR T&ES

CITY OF ALEXANDRIA

Title

9-30-76

Date _____

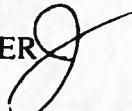
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City of Alexandria, Virginia

MEMORANDUM

DATE: SEPTEMBER 30, 2009

TO: WILLIAM SKRABAK, DIRECTOR, OFFICE OF ENVIRONMENTAL
QUALITY, TRANSPORTATION AND ENVIRONMENTAL SERVICES

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: DESIGNATED PERMIT MANAGER FOR THE SMALL MS4 (MUNICIPAL
SEPARATE STORM SEWER SYSTEM) GENERAL PERMIT

The purpose of this memorandum is to designate Director of Office of Environmental Quality ("Director", currently William Skrabak), who has the overall responsibility for environmental matters for the City of Alexandria, as the Permit Manager for the Small MS4 General Permit. As such, the Director is authorized to submit re-application and any reports required by this permit. As part of these submissions, he is also authorized to make any certifications that may be required for such submissions.

C: Mark Jinks, Deputy City Manager, City of Alexandria
Rich Baier, P.E., Director, T&ES
Emily A. Baker, P.E., City Engineer, T&ES

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TABLE OF CONTENTS

1	INTRODUCTION.....	1
2	BACKGROUND INFORMATION.....	3
3	STATUS OF COMPLIANCE WITH 2015 - 2016 PERMIT CONDITIONS.....	4
3.1	PUBLIC EDUCATION AND OUTREACH (MCM #1)	6
	<i>Public Education and Outreach Plan.....</i>	9
	<i>Clean Water Partners.....</i>	9
	<i>BMP 1A Chesapeake Bay Nutrients.....</i>	11
	<i>BMP 1B Bacteria from Pet Waste.....</i>	13
	<i>BMP 1C Illicit Discharges and Illegal Dumping from Commercial Operations</i>	15
	<i>BMP 1D General Public Education and Outreach.....</i>	16
	<i>BMP 1E Stream Crossing Signs.....</i>	17
	<i>BMP 1F Stormwater BMP Signage.....</i>	18
	<i>BMP 1G Storm Drain Inlet Marking.....</i>	18
	<i>BMP 1H Water Quality Web Site.....</i>	18
	<i>BMP 1I Education Concerning PCBs.....</i>	19
3.2	PUBLIC INVOLVEMENT/PARTICIPATION (MCM #2)	20
	<i>BMP 2A Public Notice and Participation.....</i>	20
	<i>BMP 2B Staff Support and Annual Water Quality Update to EPC.....</i>	21
	<i>BMP 2C Local Events.....</i>	21
3.3	ILLICIT DISCHARGE DETECTION AND ELIMINATION (MCM #3)	23
	<i>BMP 3A Call.Click.Connect and Nuisance Abatement Hotline.....</i>	24
	<i>BMP 3B Household Hazardous Waste Program.....</i>	26
	<i>BMP 3C Prohibition on Illicit Discharges.....</i>	26
	<i>BMP 3D Illicit Discharge Detection and Elimination Training.....</i>	27
	<i>BMP 3E Mapping of Permitted Stormwater Discharges.....</i>	27
	<i>BMP 3F Prohibition of Outdoor Cleaning of Restaurant Equipment.....</i>	27
	<i>BMP 3G Storm Sewer System Map</i>	27
	<i>BMP 3H Dry Weather Outfall Screening and Illicit Discharge Investigations</i>	28
3.4	CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (MCM #4)	28
	<i>BMP 4A Maintain DCR Erosion and Sediment Control Program Consistency</i>	29
	<i>BMP 4B VPDES Construction General Permit</i>	29
	<i>BMP 4C Site Inspections and Tracking of Land Disturbing Activities</i>	30
	<i>BMP 4D Citizen Complaint Reporting Mechanism</i>	32
3.5	POST CONSTRUCTION STORMWATER MANAGEMENT (MCM #5).....	33

<i>BMP 5A</i>	<i>BMP Data Tracking System</i>	33
<i>BMP 5B</i>	<i>Stormwater Facility BMP Maintenance Agreements and Guidelines</i>	34
<i>BMP 5C</i>	<i>Implementation of Bay Act and Local VSMP Authority</i>	35
<i>BMP 5D</i>	<i>Stormwater Facility BMP Design Guidelines</i>	35
<i>BMP 5E</i>	<i>Public Stormwater Facility BMP Facility Inspection and Maintenance</i>	35
<i>BMP 5F</i>	<i>Private Stormwater Facility BMP Facility Inspection and Enforcement</i>	36
3.6	POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS (MCM #6)	36
<i>BMP 6A</i>	<i>Environmental Stakeholder Groups</i>	37
<i>BMP 6B</i>	<i>Stormwater Pollution Prevention Plans for Municipal High-Priority Facilities</i>	38
<i>BMP 6C</i>	<i>Street Sweeping and Leaf Collection Programs</i>	40
<i>BMP 6D</i>	<i>Catch Basin and Inlet Cleaning Program</i>	40
<i>BMP 6E</i>	<i>Employee “Report a Problem” Program</i>	40
<i>BMP 6F</i>	<i>Turf and Nutrient Management</i>	41
<i>BMP 6G</i>	<i>Pollution Prevention Training</i>	43
<i>BMP 6H</i>	<i>Standard Operating Procedures for Daily Operations</i>	43
<i>BMP 6I</i>	<i>Contractor Oversight</i>	43
4	EVALUATION AND ASSESSMENT OF BMPS	44
5	RESULTS OF INFORMATION COLLECTED AND ANALYZED	44
6	SUMMARY OF PERMIT YEAR 4 PLANNED ACTIVITIES	44
7	CHANGES IN IDENTIFIED BMPS OR MEASURABLE GOALS	48
8	RELIANCE ON OTHER GOVERNMENT ENTITIES	49
9	APPROVAL STATUS OF QUALIFYING LOCAL PROGRAMS	49
10	SPECIAL CONDITIONS – LOCAL TMDLS	49
11	SPECIAL CONDITIONS – CHESAPEAKE BAY TMDL	50
12	ILLICIT DISCHARGES	50
13	LAND DISTURBING ACTIVITIES	57
14	INFORMATION ON STORMWATER MANAGEMENT FACILITIES	59
15	NEW OR TERMINATED SIGNED AGREEMENTS	59
16	WRITTEN PUBLIC COMMENTS	59
17	APPENDICES	59

APPENDICES

Appendix A – Minimum Control Measure #1

1. Chesapeake Bay eNews
2. City's Stormwater Quality Webpage about Fertilizer
3. Channel 69 and 70 Public Service Announcement Slides
4. Fertilizer Letter to HOA/Condo Associations/Lawn Care Companies
5. Landscaping and Lawn Care Companies Brochure
6. Northern Virginia Clean Water Partners 2016 Summary
7. Northern Virginia Regional Commission 2015 Only Rain Survey (Clean Water Partners)
8. Pet Waste eNews
9. Pet Waste Facebook Posts
10. Link to the Only Rain Website on the City's Website
11. Pet Owner Educational Brochure
12. Animal Welfare League of Alexandria Website with pet waste message
13. Only Rain and Clean the Bay Day eNews
14. Street Cleaning and Stream Cleanup Facebook Posts
15. City's Stormwater Management Website
16. Letter to Restaurants about cooking oil and grease
17. Restaurants and Food Handling Businesses Brochure
18. Letter to Auto Shops about motor oil and other automotive fluids
19. Automotive Garage and Service Centers Brochure
20. Excerpts from Eco-City Alexandria Presentation
21. City's Website with information about Storm drain marking
22. Sign for Stormwater Management Facilities
23. BMP Sign Requirement on Plan Set
24. Plan set with the requirement to place City Storm drain markers within 50 feet of the property line
25. City's Volunteer Website Page
26. City's Website with information about PCBs
27. PCB Educational Brochure for High Risk Property Owners
28. PCB Notification on Plan Set

Appendix B – Minimum Control Measure #2

1. City's Website with MS4 Program Plan and Annual Report
2. Sample Environmental Policy Commission Meeting Agenda and Presentation
3. Alexandria Earth Day Poster
4. Alexandria Earth Day Survey Results
5. Alexandria Earth Day eNews

Appendix C – Minimum Control Measure #3

1. Call.Click.Connect web-based form capture
2. Permit Plan Program capture
3. Cityworks Program capture
4. City's Household Hazardous Waste webpage
5. Household Hazardous Waste & Electronics Recycling Program Brochure
6. State Permitted Discharges Map
7. State Permitted Discharges Table
8. Robinson Terminal North – Conditions regarding cooking residue
9. Permit Year 3 Outfall Inspections Table

Appendix D – Minimum Control Measure #4

1. E&SC Ordinance (excerpt)

Appendix E – Minimum Control Measure #5

1. City Stormwater BMP Location Map
2. Stormwater BMP Maintenance Agreement example
3. Letter to owners of Single Family Lot BMPs
4. Sample Single-Family Educational Materials for Single-Lot BMPs
5. Local VSMP Authority Approval Letter
6. Environmental Management Ordinance
7. Public Stormwater Facility BMP Inspections
8. Private Stormwater Facility BMP Inspections

Appendix F – Minimum Control Measure #6

1. Environmental Industrial Unit Sample Agenda
2. Water Quality Steering Committee Sample Agenda
3. Water Quality Work Group Sample Agenda
4. Report a Problem Internal System capture
5. Illicit Discharge Staff Training Sign In Sheets

Appendix G – Information on SWM Facilities

1. BMPs Installed in Permit Year 3 Table

ACRONYMS

AWL – Animal Welfare League
BMP – Best Management Practice
C&I – Construction and Inspection
CSS – Combined Sewer System
CRM - Customer Relations Management
DEQ – Department of Environmental Quality
E&SC – Erosion and Sediment Control
EIU – Environmental Industrial Unit
EMO – Environmental Management Ordinance
EPC – Environmental Policy Commission
GI – Green Infrastructure
HOA – Home Owners Association
LID – Low Impact Development
MCM – Minimum Control Measure
MS4 - Municipal Separate Storm Sewer System
NMP - Nutrient Management Plans
NVRC – Northern Virginia Regional Commission
OEQ – Office of Environmental Quality
PCB - polychlorinated biphenyls
PSA - Public Service Announcement
PY – Permit Year
RCPA – Department of Recreation, Parks and Cultural Activities
SEAS - School Environmental Action Showcase
SWCB – State Water Control Board
SWM - Stormwater Management Division
SWPPP – Stormwater Pollution Prevention Plan
T&ES – Department of Transportation and Environmental Services
TMDL – Total Maximum Daily Load
VCA - Veterinary Centers of America
VESCL – Virginia Erosion and Sediment Control Law
VESCR – Virginia Erosion and Sediment Control Regulations
VPDES - Virginia Pollutant Discharge Elimination System
VSMP – Virginia Stormwater Management Program
WQSC – Water Quality Steering Committee
WQWG – Water Quality Work Group

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1 Introduction

This 2015 – 2016 MS4 Annual Report has been prepared by the City of Alexandria Department of Transportation and Environmental Services in accordance with the requirements of the General VPDES (Virginia Pollutant Discharge Elimination System) Permit for Discharges of Storm Water from Municipal Separate Storm Sewer Systems (9VAC25-890-40 *et seq.*). The City was originally issued General Permit VAR040057 on July 8, 2003. The Virginia Department of Environmental Quality (DEQ) reissued the current five-year permit effective July 1, 2013.

Under the terms of the General Permit, the City has developed a Municipal Separate Storm Sewer System (MS4) Program Plan to implement six minimum control measures aimed at reducing the discharge of pollutants to the “maximum extent practicable.” Minimum control measures include:

1. Public Education and Outreach	4. Construction Site Runoff Control
2. Public Participation and Involvement	5. Post-Construction Stormwater Management
3. Illegal Discharge Detection and Elimination	6. Pollution Prevention and Good Housekeeping

The General Permit requires that the City submit annual reports no later than October 1st covering the reporting period of the preceding July 1st through June 30th. This annual report covers the period of July 1, 2015 through June 30, 2016. Part II E 3 of the General Permit outlines the requirements for the annual report:

- a. Background information, including: (1) the name and state permit number of the program submitting the annual report; (2) the annual report permit year; (3) modifications to any operator’s department’s roles and responsibilities; (4) number of new MS4 outfalls and associated acreage by HUC added during the permit year; and, (5) signed certification in accordance with 4VAC50-60-370.
- b. The status of compliance with permit conditions, an assessment of the appropriateness of the identified best management practices, and progress towards achieving the identified measurable goals for each of the minimum control measures.
- c. Results of information collected and analyzed, including monitoring data, if any, during the reporting period.
- d. A summary of the stormwater activities the operator plans to undertake during the next reporting cycle.
- e. A change in any identified best management practices or measurable goals for any of the minimum control measures, including steps to be taken to address any deficiencies.

- f. Notice that the operator is relying on another government entity to satisfy some of the state permit obligations (if applicable).
- g. The approval status of any programs pursuant to Section II C of the permit (if appropriate), or the progress towards achieving full approval of these programs; and
- h. Information required for any applicable TMDL per special conditions in permit Section I.

This annual report is organized to address these required elements. Additionally, each minimum control measure contains specific annual reporting requirements provided in the following summary of these key reporting items addressed herein:

- A list of the education and outreach activities conducted during the reporting period for each high priority water quality issue, the estimated number of people reached, and an estimated percentage of the target audience or audiences reached.
- A list of the education and outreach activities that will be conducted during the next reporting period for each high-priority water quality issue, the estimated number of people that will be reached, and an estimated percentage of the target audience or audiences that will be reached.
- A web link to the MS4 Program Plan and annual report and documentation of compliance with public participation requirements.
- A list of any written notifications of physical interconnection given to other MS4 operators.
- The number of illicit discharges identified during the reporting period and a narrative of how they were controlled or eliminated.
- The total number of outfalls screened, the screening results, and detail of any necessary follow up actions.
- Regulated land-disturbing activities data tracked under Section II 4, including total regulated activities, number of acres disturbed, and inspections conducted.
- A summary of enforcement actions taken, including the total number and type of enforcement actions for land-disturbing activities.
- All known permanent stormwater management facility data tracked under Section II B 5 b (6) submitted in a database format to be prescribed by the department.
- The total number of stormwater management facility inspections completed and, when applicable, the number of enforcement actions taken to ensure long-term maintenance.
- A summary report on the development and implementation of daily operating procedures, required SWPPPs, turf and landscape nutrient management plans (NMPs) and training programs.

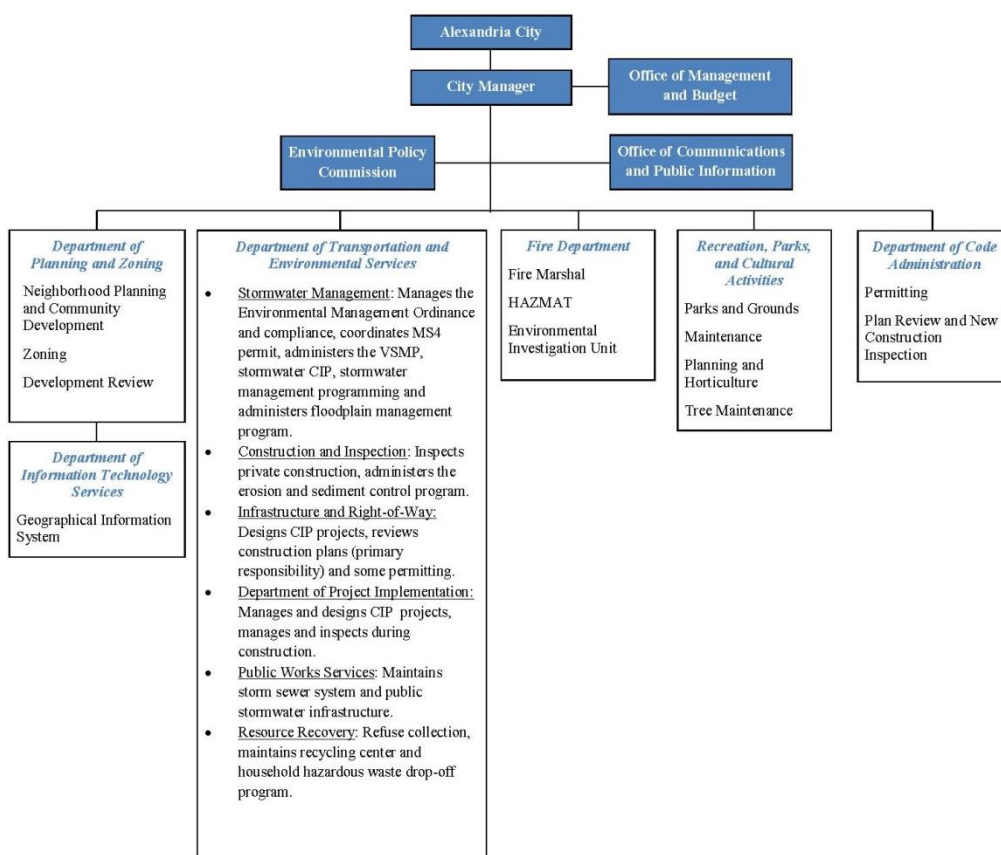
2 Background Information

This section provides background information as required in Part II.E.3.a of the General Permit.

Name of Operator:		Reporting Period:		Permit Number:		
City of Alexandria		2015 - 2016		VAR040057		
Modifications to Roles and Responsibilities: None.						
New MS4 Outfalls:	Potomac River (PL28)		Cameron Run (PL26)		Four Mile Run (PL25)	
	Outfalls	Drainage	Outfalls	Drainage	Outfalls	Drainage
	None	None	None	None	None	None

The organizational chart below outlines City departments with major stormwater management functions or responsibilities. Additional information about each department is found in the MS4 Program Plan.

Stormwater Management Organizational Chart



The organizational chart outlines major stormwater activities and functions divided among several different departments and divisions. The City has recently created a separate Stormwater Management Division (SWM) that has the primary responsibility for coordinating permit compliance.

3 Status of Compliance with 2015 - 2016 Permit Conditions

The following provides the status of best management practices for each of the six minimum control measures (MCMs) during the 2015 – 2016 reporting period, or Permit Year 3 (PY3). The City is required to update the MS4 Program Plan according to the schedule provided in Table 1 of the general permit. This annual report is organized to reflect the City's PY1 Updated MS4 Program Plan that was updated and submitted with the PY1 Annual Report, so that the BMPs under each MCM follows the format for the previous program plan that was current for the PY1 reporting period. The PY3 Updated MS4 Program Plan will be the document that maps out the compliance activities for the 2016 – 2017 reporting period (PY3), and is included in this annual report submittal under separate cover. A summary of the changes in BMPs or measurable goals for PY3 is provided in the table below.

Status of MS4 Program Plan Updates		
Required Update	Due Date	Program Plan Reference
Public Education and Outreach Plan	June 30, 2014	Complete: See MS4 Program Plan BMPs 1A – 1C
Illicit Discharge Procedures		Complete: See MS4 Program Plan MCM #3 and Appendix C
Operator Owned Stormwater Management Inspection Procedures		Complete: See Program Plan BMP 5E and Appendix E
Individual Residential Lot Stormwater Management Criteria		Complete: See MS4 Program Plan BMP 5F and Appendix E
Stormwater Pollution Prevention Plan (SWPPP) Locations		Complete: See MS4 Program Plan BMP 6B and report BMP 6B
Nutrient Management Plan (NMP) Locations		Complete: See MCM #6 and BMP 6D
Training Schedule and Program		Complete: See MCM #6 and BMP 6E
Stormwater Management Progressive Compliance and Enforcement	June 30, 2015	Complete: See MS4 Program Plan BMP 4C
Daily Good Housekeeping Procedures		Complete: See MS4 Program Plan BMP 6I and Appendix F
NMP Interim Implementation (at least 15% of total acreage)		Complete: See MS4 Program Plan and BMP 6F
Storm Sewer and Outfall Map	June 30, 2017	MCM #3 and BMP 3G
Full SWPPP Implementation		MCM #6 and BMP 6B
Full NMP Implementation		MCM #6 and BMP 6F
TMDL Action Plan	Due Date	Program Plan Reference
Chesapeake Bay TMDL Action Plan	June 30, 2015	Complete: See MS4 Program Plan Section B and Appendix A, and Section 10 of this report
Updated TMDL Action Plans (TMDLs approved before July 2008)		Complete: See MS4 Program Plan Section B and Appendix B, and Section 10 of this report
Other TMDL Action Plans (TMDLs approved July 2008 – June 2013)	June 30, 2016	Complete: See MS4 Program Plan Section B and Appendix A, and Section 10 of this report

Each section begins with a summary table describing the task, the implementation year, the measurable goal as described in the City’s updated MS4 Program Plan, and task status. Following the summary table is a more detailed discussion of the implementation status of each task. Additional support materials are located in the appendices.

3.1 Public Education and Outreach (MCM #1)

The following table is a summary of activities for Minimum Control Measure #1 and their completion status. Additional detail is provided after the table and in Appendix A.

BMP	Year	Measurable Goal	Status
1A Chesapeake Bay Nutrients			
Distribute two eNews* messages on nutrients.	PY3 to PY5	Retain copies of the eNews message on nutrients. Estimate the number of residents reached with the eNews message.	✓ Complete
Publish a message about nutrients on social media.	PY3 to PY5	Retain a copy of the social media message on nutrients. Estimate the number of residents reached with the social media message.	✓ Complete
Create “Stormwater Management” webpage.	PY3	Document the number of visits to the fertilizer-related webpage under Stormwater Management and provide a screen capture of the content.	✓ Complete
Air PSAs on Channel 70 and 69.	All	Provide the number of times the public service announcement (PSA) airs and provide the message.	✓ Complete
Distribute direct mail brochures to 33% of HOA and Condo associations.	PY3 to PY5	Provide an estimate of the number of associations exposed to the educational message and an example of the brochure sent.	✓ Complete
Participate in Northern Virginia Regional Commission (NVRC) regional campaign..	All	Provide a summary of the results of the NVRC Clean Water Partners program efforts to reach City residents, a summary of the survey results, and an estimate of the number of individuals reached.	✓ Complete
Distribute direct mail brochures to 33% of lawn care and maintenance companies.	PY3 to PY5	Provide an estimate of the number of lawn care and maintenance companies exposed to the educational message and an example of the brochure sent.	✓ Complete
1B Bacteria from Pet Waste			
Distribute two eNews* messages on proper disposal of pet waste.	PY3 to PY5	Provide an estimate of the number of residents exposed to the educational message distributed through eNews.	✓ Complete

BMP	Year	Measurable Goal	Status
Social media pet waste message.	PY3 to PY5	Provide an estimate of the number of residents reached with the social media message.	✓ Complete
Revise website message to include link to www.onlyrain.org .	PY3	Document the number of visits to the pet waste-related webpage under Stormwater Management and a screen capture of the content.	✓ Complete
Maintain pet waste stations and install new as applicable.	All	Document the number of pet stations in the City and the refills provided.	✓ Complete
Distribute brochures at events.	All	Provide an estimate of the number of brochures handed out at events.	✓ Complete
Distribute brochures at Animal Shelter.	All	Provide an estimate of the number of brochures distributed at the Animal Shelter during adoptions.	✓ Complete
Distribute brochures at Veterinary Centers of America (VCA) and Old Towne School for dogs.	PY3 to PY5	Provide an estimate of the number of brochures distributed at local businesses.	✓ Complete
Participate in NVRC.	All	Provide a summary of the results of the NVRC Clean Water Partners program efforts to reach City residents, a summary of the survey results, and an estimate of the number of individuals reached.	✓ Complete
Explore including message on Animal Shelter licensing website.	PY3	Explore the possibility and include a pet waste message on the on the Animal Shelter online licensing webpage. Document the findings. http://alexandriaanimals.org/pet-licensing-now-online/ .	✓ Complete
1C Illicit Discharges and Illegal Dumping from Commercial Operations			
Distribute two eNews* messages on illicit discharges and illegal dumping.	PY3 to PY5	Provide an estimate of the number of residents exposed to the educational message distributed through eNews.	✓ Complete
Social media message.	PY3 to PY5	Provide an estimate of the number of residents reached with the social media message.	✓ Complete

BMP	Year	Measurable Goal	Status
Create “Stormwater Management” webpage with link to www.onlyrain.org .	PY3	Document the number of visits to the fertilizer-related webpage under Stormwater Management and a screen capture of the content.	✓ Complete
Air PSAs on Channel 70 and 69.	All	Provide the number of times the PSA airs and provide the message.	✓ Complete
Participate in NVRC.	All	Provide a summary of the results of the NVRC Clean Water Partners program efforts to reach City residents, a summary of the survey results, and an estimate of the number of individuals reached.	✓ Complete
Distribute direct mail brochures to targeted businesses.	PY3 to PY5	Provide an estimate of the number of targeted businesses exposed to the educational message and an example of the brochure sent.	✓ Complete
1D General Public Education and Outreach			
Distribute brochure at community events.	All	Provide an estimate of the number of residents reached through brochure distribution at community events. Retain copies of the brochures.	✓ Complete
Present educational materials to schools and civic groups.	All	Provide an estimate the number of residents reached through distributed educational material. Retain copies of the educational materials.	✓ Complete
Distribute general eNews* messages.	All	Provide an estimate of the number of residents exposed to the educational message distributed through eNews.	✓ Complete
Continue participation in regional education programs.	All	Document the number of programs and provide a description of each.	✓ Complete
1E Stream Crossing Signs			
Maintain stream crossing signs.	All	Document the maintenance of the signs.	✓ Complete
1F Stormwater BMP Signage			
Implement stormwater BMP signage.	All	Provide a copy of a final site plan sheet with the location and details of signage or labeling to identify new surface structural stormwater BMPs.	✓ Complete

BMP	Year	Measurable Goal	Status
1G Storm Drain Inlet Marking			
Implement storm drain inlet marking.	All	Provide a copy of a final site plan sheet showing the requirement that all storm water inlets within 50 feet of the project are to be marked. Provide a table with the number of storm sewer markers installed and number of groups involved.	✓ Complete
1H Water Quality Website			
Host water quality web site.	All	Provide a screen shot of the web page.	✓ Complete
1I Education Concerning PCBs			
Continue to incorporate PCB standard condition in all development site plan reviews.	All	Provide a sample of the standard condition language for a site plan.	✓ Complete
Put updated PCB brochure on the website and put copies at City Hall for distribution.	PY2 to PY5	Provide a copy of the PCB brochure and a screen shot of the webpage.	✓ Complete

*The City uses Alexandria eNews, which is a service that allows users to receive information through email on nearly 100 topics (including stormwater related messages).

Public Education and Outreach Plan

The City's Public Education and Outreach Program identified (1) Chesapeake Bay nutrients, (2) Bacteria from pet waste; and (3) Illicit discharges and illegal dumping from commercial operations as high-priority water quality issues as part of the update to the Program Plan, and created three distinct sets of BMPs to address these issues. The City continues to implement BMPs associated with various aspects of water quality and carried these forward in the updated Public Education and Outreach Plan.

Clean Water Partners

The City continues to participate in the Northern Virginia Regional Commission's (NVRC) Clean Water Partners program through its online campaign at www.onlyrain.org and radio campaign. In 2015-2016, the Clean Water Partners used television, print, internet advertising and the Only Rain website to distribute messages linked to specific stormwater problems, such as proper pet waste disposal, over fertilization of lawns and gardens and proper disposal of motor oil.

This permit year, the program updated their three high-priority water quality issues to (1) bacteria; (2) nutrients; and (3) illicit discharges of chemical components. In previous years the proper disposal of motor oil had been included; however, annual surveys by NVRC revealed a trend away from individuals changing their own oil. In response, the Clean Water Partners program replaced motor oil education with illicit discharges of chemical components. These three high priority water quality issues more closely align with the City’s current top three priorities.



Included in Appendix A is a report from the Clean Water Partners with information on the effectiveness of the program. Specifically, the program conducted an online poll survey of 500 Northern Virginia residents to determine the effectiveness of on-line efforts and a series of TV ads to reveal any changes in behavior, and to aid in directing the future efforts of the campaign.

Approximately 20% of Alexandrians responding to the survey recalled hearing or seeing the “rubber duckies” advertisement about reducing water pollution on the internet or on TV (increased from 13% in PY2).



The Clean Water Partners annual survey found that due to seeing the “rubber duckies” advertisement:

- 18% of respondents pick up pet waste more often;
- 14% of respondents plan to fertilize fewer times during the year; and
- 8% of respondents now properly dispose of motor oil.

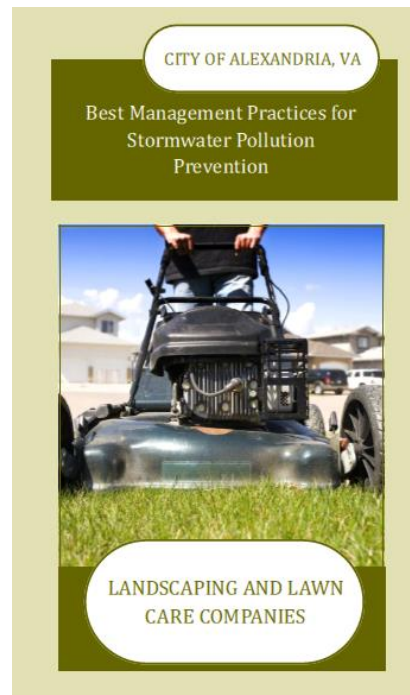
The survey also documented the following with regard to responding Alexandrians:

- 86% believe stormwater ends up in local streams, Potomac River or Chesapeake Bay;
- 75% recognized the “Only Rain Down the Storm Drain” logo (which was the largest percentage out of all of the Clean Water Partner municipalities);
- 62% felt it was “very important” for local governments to spend more money on protecting water quality; and
 - 46% would like email newsletters with quick tips about how to protect clean water.

BMP 1A Chesapeake Bay Nutrients

Chesapeake Bay nutrients (nitrogen and phosphorus) have been identified as the as the first high-priority water quality issue. The following activities were implemented in accordance with the MS4 Program Plan during PY3 to address Chesapeake Bay nutrients.

1. Prepared and distributed two messages that addressed seasonally-specific stormwater pollution prevention tactics for nutrients. The messages were distributed via electronic email to the City-wide eNews list serve and pointed readers back to the City's website with additional information on the topic. Copies of the eNews can be found in Appendix A.
2. Included a message on social media about the proper use and application of fertilizer. The Facebook posts can be found in Appendix A.
3. Created a "Stormwater Management" webpage at www.alexandriava.gov/Stormwater related to the proper application and use of fertilizers to protect water quality. Also, a link to the NVRC www.onlyrain.org website was included. A screen shot of the stormwater management web page can be found in Appendix A.
4. Continued to air stormwater pollution prevention public service announcements (PSAs) on both the government access channel (Channel 70) and the community access channel (Channel 69) h, which included information on nutrients. The ads were run once per hour, 24 hours per day. A copy of the slides aired can be found in Appendix A.
5. Distributed brochures through direct mail to 33% of HOA and condominium contacts about the proper use and application of fertilizers, and how to ensure that contractors are following best practices to protect water quality. A copy of the letter and brochure can be found in Appendix A.
6. Continued to participate in the NVRC Clean Water Partners program he partners used television, print, internet advertising and the Only Rain website to distribute messages such as over fertilization of lawns and gardens. The Clean Water Partners 2016 Summary and Survey can be found in Appendix A.
7. Distributed brochures through direct mail to 33% of lawn care and maintenance companies licensed to do business in the City. A copy of the letter and brochure can be found in Appendix A.



In order to reach an equivalent 20% of each high priority target audience through each reporting period, the City has employed numerous means and methods as outlined above to reach 33% each

year from PY2 through PY5 for a total of 100% target for the current permit. The table below provides target audience, strategy, potential target reach and estimated PY3 reach information.

Target Audience	Strategy	Potential Target Reach	Estimated PY3 Reach
Single Family Households	eNews message	Environmental eNews Subscribers – 4,009	100% of Environmental eNews Subscribers
	Social Media Message	Visitors to City Facebook Page	T&ES Facebook Page has 430 likes.
	Webpage	2,386 Stormwater Website visitors	50% of Website Visitors
	PSAs	TV Viewers – 50,000 subscribers (approximate)	100% of PSA Viewers
	NVRC Clean Water Partners	Approx. 46,000 people who do lawn care	86% of people who do lawn care
HOAs and Condo Associations	Direct Mail	Association Boards – 171 Associations	33% or 55 of total associations
Lawn Care and Maintenance Companies	Direct Mail	City Lawn Care Company Owners- 48 Companies	100% of 48 Lawn Care Companies

Measure of Effectiveness

The goal of this BMP is to reach a wide audience with a message regarding the potential impact of nutrients on the Chesapeake Bay as well as specific actions that can be taken to reduce pollution. The outreach plan was designed to meet well over the the target high priority audience required by the permit. The Comcast Spotlight Report for the Clean Water Partners’ “Only Rain” campaign provided the target population estimates and estimated reach for the entire region in the table below.

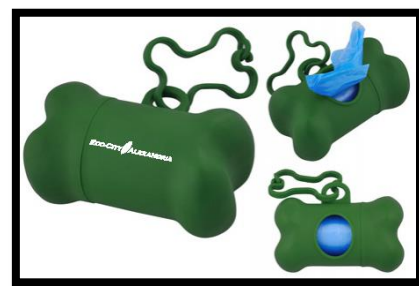
	Lifestyle Characteristics		Leisure Activities Past 12 Months		Auto Repairs Pst.Yr: Unpd.Labor-HH	
	Own A Dog		Lawn Care		Anti-Freeze/Coolant OR Oil Filter/Oil Change	
	Reach	Reach %	Reach	Reach %	Reach	Reach %
Population of Target Area	414,638	100.0%	676,165	100.0%	208,720	100.0%
2016 NVRC Campaign (Television only)	336,559	81.2%	564,318	83.5%	160,766	77.0%
2016 NVRC Campaign (TV & Online)	351,126	84.7%	581,950	86.1%	174,932	83.8%

Source: Scarborough Research- Washington DC DMA (Base Adults 18+), March 2015-March 2016 survey period

For a list of public education and outreach events, please see the table in Section BMP 1D. In addition, Appendix A contains examples and supporting materials for these best management practices.

BMP 1B Bacteria from Pet Waste

The second high-priority water quality issue identified is bacteria from pet waste. The following activities were implemented during PY3 in accordance with the MS4 Program Plan to address bacteria from pet waste.



1. Prepared and distributed two messages stressing the importance of picking up after pets and disposing of the waste properly. The messages were distributed via the City-wide eNews list serve and pointed readers back to the City's website for additional information. A copy of the eNews messages can be found in Appendix A.
2. Included messages on social media about the picking up after pets and properly disposing of the waste. A copy of the Facebook messages can be found in Appendix A.
3. Revised the bacteria from pet waste website information and inserted a link to the www.onlyrain.org website. A copy of the web page and the link to the Only Rain website can be found in Appendix A.
4. Continue to supply bags for current pet waste stations and looking to install new pet-waste stations where appropriate to make pick-up and disposal more convenient. Over 1,000 pet waste bags were provided. In addition, there are many residential communities in the City that install and maintain their own pet waste stations.
5. Updated the "Pet Waste" brochure to continue distribution at all appropriate events. The updated pet waste brochure can be found in Appendix A. In addition to the brochures, the City distributed "dog bone" pet waste bag dispensers at a number of events.

6. Continue to distribute the updated pet waste brochure at the Vola Lawson Animal Welfare League of Alexandria (AWL) including being a part of the adoption packet.
7. Distributed educational materials at VCA (Duke St.).
8. Continues to participate in the NVRC Clean Water Partners regional efforts.
9. Included a message on the Animal Welfare League webpage.
<http://alexandriaanimals.org/resources-for-pet-owners/cleaning-up-after-pets.html> A screen shot of the webpage can be found in Appendix A.

In order to reach an equivalent 20% of each high priority target audience for each year of the reporting period, the City has employed numerous means and methods as outlined above to reach 33% each year from PY2 through PY5 for a total of 100% target for the current permit. The table below provides target audience, strategy, potential target reach and estimated PY3 reach information.

Target Audience	Strategy	Target Reach	Estimated PY3 Reach
Pet Owners	eNews message	Environmental eNews Subscribers – 4,009	100% of Environmental eNews Subscribers
	Social Media Message	Visitors to City Facebook Page	T&ES Facebook Page has 430 likes
	Webpage	2,386 website visitors	100% of Website Visitors
	AWLWebpage	Website Visitors - Over 15,000 unique visitors monthly	100% of Website Visitors
	Brochures in Adoption Packets	Residents Adopting Pets- 451 brochures	100% of people adopting pets
	Brochures at Businesses	Business Patrons – Over 10,000	Business Patrons
	NVRC Clean Water Partners	4,717 Licensed Pet Owners	Over 84% of pet owners
	Direct Mail	Dog License Holders – 4,717 individuals	33% or 1,572 dog license holders

Measure of Effectiveness

The goal of this BMP is to reach a wide audience with the bacteria from pet waste message and specific actions to reduce pollution. The outreach plan was designed to meet well over the 20% of the target high priority audience required by the permit. The Comcast Spotlight Report for the Clean Water Partners’ “Only Rain” campaign provided target and reach estimates in the Table in Section 1.A for the entire Clean Water Partners region.

The Clean Water Partners annual survey found that 18% of respondents changed their behavior with regard to dog waste due to seeing the “rubber duckies” advertisement on the internet or TV. In addition, the number of respondents choosing “It causes water pollution” as the most important

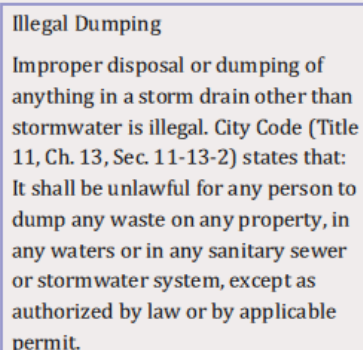
reason for picking up pet waste has risen from 15% in 2015 to 18% in 2016, with other reasons to pick up after your dog including “Don’t want to step in it” (decreased from 49% in 2015 to 29% in 2016) and “It’s what good neighbors do” (increased from 33% in 2015 to 41% in 2016).

For a list of public education and outreach events, please see the table in Section BMP 1D. In addition, Appendix A contains examples and supporting materials for these best management practices.

BMP 1C Illicit Discharges and Illegal Dumping from Commercial Operations

The third high-priority water quality issue identified is illicit discharges and illegal dumping from commercial operations. The following activities were implemented in accordance with the MS4 Program Plan during PY3 to address illicit discharges and illegal dumping from commercial operations.

1. Prepared and distributed two general illicit discharge and illegal dumping messages. The messages were distributed via electronic email to the City-wide eNews list serve and pointed readers back to the City’s website with additional information on the topic. A copy of the eNews messages can be found in Appendix A.
2. Included a message on social media about illicit discharges and illegal dumping. A copy of the Facebook messages can be found in Appendix A.
3. Created the www.alexandriava.gov/Stormwater webpage which includes a page specifically related to illicit discharges and illegal dumping for the targeted businesses and the general public, and included a link to the NVRC www.onlyrain.org website. A screen shot of the web page can be found in Appendix A.
4. Continues to air stormwater pollution prevention PSAs on both the government access channel (Channel 70) and the community access channel (Channel 69) that include information on illicit discharges and illegal dumping. The ads were run once per hour, 24 hours per day. A copy of the slides aired can be found in Appendix A.
5. Continues to participate in the NVRC Clean Water Partners regional efforts. This PY, focus has begun to transition from proper oil change procedures and disposal to illicit discharge of chemical contaminants. The Northern Virginia Clean Water Partners 2016 Summary and Survey can be found in Appendix A.
6. Distributed brochures through regular mail to 33% of the targeted businesses (restaurants, auto shops, and carpet cleaners) on best practices to protect water quality. Copies of these brochures can be found in Appendix A.



Illegal Dumping
Improper disposal or dumping of anything in a storm drain other than stormwater is illegal. City Code (Title 11, Ch. 13, Sec. 11-13-2) states that: It shall be unlawful for any person to dump any waste on any property, in any waters or in any sanitary sewer or stormwater system, except as authorized by law or by applicable permit.

In order to reach an equivalent 20% of each high priority target audience through each reporting period, the City has employed numerous means and methods as outlined above to reach 33% each year from PY2 through PY5 for a total of 100% target for the current permit. The table below provides target audience, strategy, potential target reach and estimated PY3 reach information.

Target Audience	Strategy	Potential Target Reach	Estimated PY3 Reach
Households and Business Owners	eNews message	Environmental eNews Subscribers – 4,009	100% of Environmental eNews Subscribers
	Social Media Message	Visitors to City Facebook Page	T&ES Facebook Page has 430 likes.
	Webpage	2,386 Stormwater Website visitors	100% of Website Visitors
	PSAs	TV Viewers – 50,000 subscribers (approximate)	100% of PSA Viewers
	NVRC Clean Water Partners	City-wide	Over 20% of households and business owners
Targeted Business Owners	Direct Mail	Restaurants, Auto Shops, and Carpet Cleaners	33% or 270 Restaurants and 80 Auto Shops/Carpet Cleaners

Measure of Effectiveness

The goal of this BMP is to reach a wide audience with an illicit discharge and illegal dumping message and specific actions to reduce pollution. For a list of public education and outreach events, please see the table in Section BMP 1D. In addition, Appendix A contains examples and supporting materials for these best management practices.

BMP 1D General Public Education and Outreach

The City implemented the following activities during PY3 in accordance with the MS4 Program Plan.

- Continued to distribute brochures and other educational materials at events. Copies of brochures can be found in Appendix A.
- Continued to present education materials to school and civic groups. Presentations can be found listed in the table below.
- Continued to distribute eNews to provide general stormwater education and to announce events and volunteer opportunities. Copies of the eNews messages can be found in Appendix A.

- Continued to participate in the NVRC Clean Water Partners regional efforts. The Northern Virginia Clean Water Partners 2016 Summary and Survey can be found in Appendix A.

Measure of Effectiveness

The goal of this BMP is to reach a wide audience with a general pollution prevention message as well as specific actions that can be taken to reduce pollution. The following table summarizes the City's public education and outreach activities and events where information on pollution prevention and water quality were distributed. Appendix A contains examples from the City's general education program.

Activity	Topic	Date	Number of Participants (approximate)
NVCC Presentation	Stormwater / Eco-City General	4/6/2016	40
2016 School Environmental Action Showcase (SEAS)	Build Your Own Sand Filter / Green Infrastructure	4//6/2016	500
2016 Potomac Watershed River Clean-up	Trash Mitigation	4/16/2016	110
US Patent and Trademark Office Green Fair	Stormwater, Eco-City General	4/21/2016	1,000
Alexandria Earth Day	Nonpoint Source and Water Resources; Eco-City General	4/30/2016	1,000
Rain Barrel Workshop	Water Resources, Chesapeake Bay	5/7/2016	15
Bike to Work Day	OEQ / Eco-City General	5/20/2016	500
Environmental Policy Commission	Eco-City Progress Report	3/21/2016	20

BMP 1E Stream Crossing Signs

The City previously installed 33 signs at 18 locations where roads cross major waterways. In addition, the City installed nine signs at major stream crossings on hike/bike trails. The signs promote awareness of Alexandria's surface water resources, water bodies, and drainage basins.

Measure of Effectiveness

The City continues to maintain these signs so that they are in good condition.

BMP 1F Stormwater BMP Signage

The City continues to require all new and redevelopment projects to provide signage or labeling to identify new surface structural stormwater BMPs. This requirement is implemented during the City site plan approval process.

Measure of Effectiveness

BMP signage is required for surface structural stormwater BMPs installed and a photo of the BMP sign and a copy of a final site plan sheet calling for the BMP signage can be found in Appendix A. See Section 13 for a list of all stormwater BMPs installed in PY3.

BMP 1G Storm Drain Inlet Marking

The City was one of the first localities in Northern Virginia to implement a storm sewer marking program. The City continues to require new development and redevelopment to mark storm drain inlets within the development and located within 50 feet of the project with information on the drainage destination of waters entering the structures. In addition, City staff continues to promote the storm drain marking program at community events and to work with interested residents to implement storm drain marking.



Measure of Effectiveness

Storm drain markers were installed as a requirement of development or redevelopment and a sample plan sheet with this requirement is provided in Appendix A. In addition, the City promoted storm drain marking projects on the City's website as a volunteer opportunity.

BMP1H Water Quality Web Site

The City continues to host a stormwater quality web page and has created a new dedicated page at www.alexandriava.gov/Stormwater. The page has information about pollution, BMPs, and protecting local streams and rivers. In addition, pages linked to this main page contain external links for the Chesapeake Bay Preservation Act, the Virginia Stormwater Management Program (VSMP) and the Construction General Permit. It also contains information and links for the City's Environmental Management and Erosion and Sediment Control ordinances and information on the Chesapeake Bay TMDL, to include the Bay TMDL Action Plan. Staff continues to add new content to the site and update existing content.

In addition, the Office of Environmental Quality (OEQ) web page (<http://alexandriava.gov/Environment>) has a calendar for upcoming environmental events and a "What is New" section that are updated by staff to highlight upcoming events or important information, and posts information on the Transportation and Environmental Services (T&ES) Facebook page. These tools are used to promote volunteer stream cleanups, green building workshops; "build your own" rain barrel workshops, pre-made rain barrel sales events, and other water quality related topics. Users may also sign up for *Alexandria eNews* email alerts with a specific

focus on environmental and water quality issues, as well as information on volunteer opportunities, tips, and workshops.

Finally, the City maintains its online resident reporting capabilities (See BMP 3A). The City's *Call.Click.Connect* Customer Relations Management (CRM) initiative is prominent on the City's main page and subordinate pages.



City's *Call.Click.Connect* portal at 703-746-HELP (4357) and www.alexandriava.gov

Measure of Effectiveness

A snapshot of the Stormwater Management and the T&ES-OEQ webpages, and the T&ES Facebook page, is found in Appendix A.

BMP11 Education Concerning PCBs

The City has a brochure updated during PY2 that educates about residents and development community about PCBs. Additionally, the City was required to develop and implement the Tidal Potomac PCB TMDL Action Plan per Section I.B of the permit. The action plan was developed by the June 30, 2015 due date and will be implemented in PY3. Implementation builds upon program activities in the previous permit.

1. Continued to include standard condition language for all site plan (DSP and DSUP) requiring a site characterization for PCBs during the redevelopment of a property where PCBs have been historically used or stored, or during the redevelopment of a property that falls into a DEQ identified high risk category for PCBs. The language was updated in PY3 and included in all site plan reviews, placing the onus on the developer to perform due diligence; and is reviewed by the City.
2. The PCB brochure was updated and uploaded to the web site. Brochures were placed at City Hall for the public to obtain. A screen shot of the website and the brochure can be found in Appendix A.
3. The Tidal Potomac River PCB TMDL Action Plan was developed in PY2.

Measure of Effectiveness

Standard condition language for a site plan reviewed during the reporting period and a copy of the updated PCB brochure is included in Appendix A. More information on the Tidal Potomac PCB TMDL Action Plan is included in Section 10. The Action Plan is included by reference in Appendix B of the updated MS4 Program Plan submitted with this annual report under separate cover.

3.2 Public Involvement/Participation (MCM #2)

The following table is a summary of activities for Minimum Control Measure #2 and their completion status. Additional detail is provided after the table and in Appendix B.

BMP	Year	Measurable Goal	Status
2A Public Notice and Participation			
Meet all public notice requirements.	All	Document public notices, minutes, and other actions as appropriate.	✓ Complete
Post annual program plan updates on web site.	All	Document that annual program plans have been placed on the website.	✓ Complete
Post annual reports on web site.	All	Document that annual reports have been placed on the website.	✓ Complete
2B Staff Support and Annual Water Quality Update to the EPC			
Provide staff support to the Environmental Policy Commission.	All	Provide annual reports of the EPC as available and any relevant meeting minutes.	✓ Complete
Provide annual water quality update to the EPC.	All	Document the annual EPC update and provide a summary of any feedback.	✓ Complete
2C Local Events			
Sponsor annual Alexandria Earth Day.	All	Document sponsorship and participation in Earth Day.	✓ Complete
Sponsor, promote, and participate in at least four local events.	All	Document sponsorship, promotion, and participation in four local events (including Earth Day).	✓ Complete

BMP 2A Public Notice and Participation

The City implemented the following BMPs during PY3 in accordance with the MS4 Program Plan.

1. The City met all requirements with respect to public notice and comments regarding the stormwater management program and permit requirements.
2. Post annual updates to the Program Plan. The PY3 Updated MS4 Program Plan will be posted on the stormwater web site to replace the PY2 update within 30 days of submittal to DEQ.
3. The PY2 Annual Report is posted on the stormwater web site. The PY3 Annual Report will be posted within 30 days of submittal to DEQ.

Measure of Effectiveness

No comments were received for the PY2 Updated Program Plan in general, while the city did receive comments on the Chesapeake Bay Action Plan and the Local TMDL Action Plan that are discussed in sections 11 and 10, respectfully. A screen shot of the stormwater web page that shows the link to the PY2 MS4 Program Plan and the PY2 Annual Report is provided in Appendix B.

BMP 2B Staff Support and Annual Water Quality Update to EPC

The Office of Environmental Quality continues to provide ongoing staff support to the Environmental Policy Commission. Appointed by City Council, the EPC makes recommendations on environmental issues, including stormwater management. In order to ensure that the EPC provides a balanced perspective, its members represent predetermined stakeholder groups and professional backgrounds.

This BMP requires an annual update to the EPC on water quality programming in the City. This was conducted at the same time as the Eco-City Alexandria Update, which occurred on March 21, 2016. The Eco-City Alexandria effort includes water quality and had an aggressive public involvement and engagement component.

Measure of Effectiveness

Appendix B contains the Eco-City Alexandria Update at the EPC meeting on March 21, 2016.

BMP 2C Local Events

The City sponsored, promoted, and participated in several local events to educate citizens about the importance of preventing storm water pollution. These BMPs were implemented during PY3 in accordance with the MS4 Program Plan.



1. Continued to be an active sponsor of the Alexandria Earth Day event. The City's support for this event serves to strengthen private environmental stewardship efforts and provides citizens with a broad range of educational opportunities. The website for official Alexandria Earth Day activities is www.alexearthday.org. Earth Day celebrations were held on April 30, 2016.
2. Continued to partner with non-profit volunteer organizations to promote, organize, and encourage stream clean-up events. The City participated in 11 different local public outreach events as documented in the following table.

Activity	Date	Volunteers/ Participants	Event Details
Virginia Clean Waterways Cleanup (International Coastal Cleanup) Oronoco Bay Park	9/19/2015	125	International event that is the largest volunteer effort for our ocean. Recovered 78 bags, a large tire, and 30 lbs. of lumber.
Restoring America's Estuaries	9/26/2015	17	
AECOM Oronoco Bay Park Cleanup	4/2/2016	25	Clean up at Oronoco Bay Park
School Environmental Action Showcase (SEAS) at George Mason University	4/6/2016	500+	Regional event about empowering students and celebrating the “Green or Eco” work they are doing at their school and in their communities. The City is a partner organization and ran a hand on learning activity about bioretention filters.
2016 Potomac River Watershed Cleanup at Four Mile Run (3700 Commonwealth Avenue location) and Historic Holmes Run (Beatley Library)	4/16/2016	67	Events were part of the 28 th Annual Potomac River Watershed Cleanup. Bags (trash) = 82 No. of Tires = 4.5 No. of Shopping Carts = 1
Lucky Run Cleanup	4/20/2016	4	10 bags of trash were recovered.
U.S. Patent & Trademark Office Green Fair	4/21/2016	100+	Annual event that showcases ways employees and their families can live a greener lifestyle at work and home.
Taylor Run Cleanup	4/24/2016	27	17 bags of trash were recovered.
Rain Barrel Workshop	5/7/2016	30	The City partners with the Northern Virginia Soil & Water Conservation District to conduct a build-your-own rain barrel workshop. The workshop also covers the importance and how to maintain the rain barrel.
Bike to Work Day	5/20/2016	430+	The City distributed stormwater management pamphlets and other outreach materials at a Bike to Work Day pit stop.
Clean the Bay Day	6/4/2016	9	28 th year of the annual event which helped kick off the very first Chesapeake Bay awareness week. 22 bags of trash were recovered.

Measure of Effectiveness

Approximately 1,000 people attended the 2016 Alexandria Earth Day event. City staff was on hand to distribute materials and host children's activities to educate residents about water quality and the importance of pollution prevention. Staff also distributed educational giveaway items, such as Eco-City branded water bottles and individual pet waste dispensers. Finally, the City conducted a survey of water quality issues. According to survey respondents, fertilizer (53%, respectively) was considered the biggest source of pollution, and 37% of the respondents thought that stormwater went to a treatment plant. The City's 2016 Earth Day poster and survey are included in Appendix B.



Activities at the other 10 events that the Stormwater Management Division participated included clean-up where staff educated participants about stormwater pollution and prevention; distribution of educational and outreach materials; and student exhibits/experiments to increase knowledge about the harmfulness of pollution. These activities all create awareness regarding the importance of preventing stormwater pollution.

3.3 Illicit Discharge Detection and Elimination (MCM #3)

The following table is a summary of activities for Minimum Control Measure #3 and their completion status. Additional detail is provided after the table and in Appendix C.

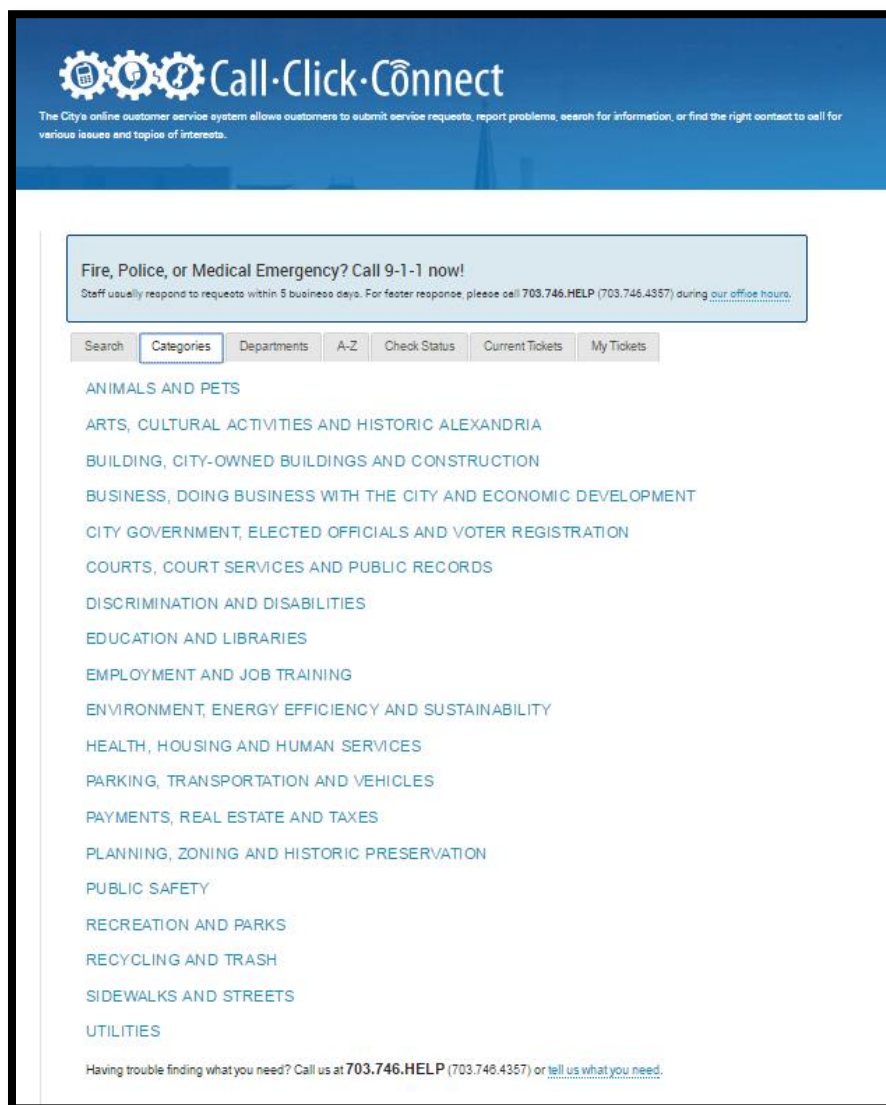
BMP	Year	Measurable Goal	Status
3A Call.Click.Connect and Nuisance Abatement Hotline			
Maintain <i>Call.Click.Connect</i> and the Nuisance Abatement Hotline.	All	Screen capture of Call.Click.Connect web form and call number, and Nuisance Abatement Hotline webpage. Document the number and types of incidents handled.	✓ Complete
3B Household Hazardous Waste (HHW) Program			
Provide HHW and used oil collection services.	All	Provide copies of the program web site and brochures. Document program participants and the number of barrels accepted.	✓ Complete
3C Prohibition on Illicit Discharges			
Enforce prohibition on illicit discharges (Chapter 13 of City Code).	All	Report number of discharges and provide a narrative on how they were controlled or eliminated. Review procedures and make recommendations accordingly.	✓ Complete

BMP	Year	Measurable Goal	Status
3D Illicit Discharge Detection and Elimination Training			
Provide biennial staff training on “Recognizing and Reporting Illicit Discharges”	PY1, PY3 & PY5	Document training activities (under BMP 6G)	✓ Complete
3E Identification of Permitted Stormwater Discharges			
Keep up-to-date permitted discharges information and distribute to field crews.	All	Provide up-to-date map and list of state-permitted stormwater discharges.	✓ Complete
3F Prohibition of Outdoor Cleaning of Restaurant Equipment			
Enforce prohibition on outdoor cleaning of restaurant equipment.	All	Document example SUP, if one has been done in the reporting period.	✓ Complete
3G Storm Sewer System Map			
Maintain an up-to-date storm sewer map and outfall information table.	All	Keep up-to-date storm sewer map and outfall information table available on request.	✓ Complete
Update the storm sewer map and outfall table.	PY4	Include PDF of updated storm sewer map and information table in PY4 annual report.	✓ On Schedule
Notify downstream MS4s of any new physical interconnections.	All	List of any new written notifications.	✓ Complete
3H Dry Weather Outfall Screening and Illicit Discharge Investigations			
Conduct dry weather outfall screening on 50 outfalls annually.	All	Summarize the total number of outfalls inspected, the results and any follow up actions, if applicable.	✓ Complete
Investigate all illicit discharges reported or discovered.	All	Provide summary of investigations to include results, resolution, follow up activities and closure date.	✓ Complete

BMP 3A *Call.Click.Connect* and Nuisance Abatement Hotline

The City continues to maintain the *Call.Click.Connect* customer service system that includes a web-based reporting form and Call Center, and the 24-hour Nuisance Abatement Hotline (703-836-0041), which is prominently displayed in many areas on the City’s web site. Complaints are handled jointly

through T&ES-Stormwater and the Fire Marshal's Environmental and Industrial Unit (EIU). Call.Click.Connect is the City's dedicated Customer Relations Management (CRM) portal and integrates Cityworks™ asset management software. Reports and investigations are tracked through Cityworks™ and Permit Plan.



Measure of Effectiveness

The City (through T&ES-Stormwater and EUI reporting mechanisms) handled 72 water quality and illicit discharge related complaints or incidents in PY3. The Stormwater Management Division receives complaints directly from Cityworks and/or enters the information received via email, phone or other source. The EIU is responsible for entering this information into the Permit Plan database when both the SWM Division and EIU are actively involved, while they coordinate on response and follow-up. The SWM Division receives and enters data into Cityworks for incidents handled solely by their office.

Section 12 provides a summary of the complaints and a narrative on how each discharge was controlled or eliminated. Unlike previous years where the most frequent complaints involved petroleum, illicit discharge of construction/maintenance related materials were the most reported in PY3. Screen shots of the Call, Click, Connect web-based reporting form, Permit Plan and Cityworks™ are provided in Appendix C.

BMP 3B Household Hazardous Waste Program

Participation in the HHW Program continues to be a popular and effective program with almost 10,000 residents using the program in PY3. The slight decrease in the number of program participants is likely due to three collection days being lost during the blizzard in the City. Additionally, the decrease in the number of barrels can be attributed to the disposing of latex paint in their original containers instead of building the material into the large drums. The web site <http://alexandriava.gov/tes/solidwaste/info/default.aspx?id=19206> includes information on the types of materials that may be left at the drop-off points and the schedule for drop-offs. The following table provides a snapshot of HHW program statistics:

Year	Users	Barrels of HHW
FY2008	4,987	-
FY2009	6,067	754
FY2010	7,059	875
FY2011	7,920	822
FY2012	7,698	702
FY2013	8,424	759
FY2014	9,535	516
FY2015	10,476	504
FY2016	9,976	409

Household Hazardous Waste & Electronics Recycling Program



3224 Colvin Street
Alexandria, VA 22314

Hours of Operation
Monday & Saturday (Except holidays)
7:30 a.m. to 3:30 p.m.



T&ES - Solid Waste Division
(703) 746-4410
alexandriava.gov/recycling

Eco-CITY ALEXANDRIA

Measure of Effectiveness

A screen capture of the HHW webpage and the most recent program brochure is provided in Appendix C.

BMP 3C Prohibition on Illicit Discharges

The purpose of this BMP is to ensure that the City has the legal tools necessary to effectively prohibit illicit discharges and to conduct necessary enforcement in the case of an illicit discharge. City Council has already adopted appropriate measures and provided documentation in previous annual reports.

The City Attorney has reviewed the City Code and has determined that no additional changes are needed at this time.

Measure of Effectiveness

Section 12 provides a summary of illicit discharge complaints and a narrative on how each complaint was handled, including how any actual discharge was controlled or eliminated as appropriate. No pattern of illicit discharges necessitated a review of policies, procedures, or ordinances.

BMP 3D Illicit Discharge Detection and Elimination Training

The City continues to incorporate illicit discharge and dumping training. The Training Schedule and Plan found in BMP 6G include “Recognizing and Reporting Illicit Discharges” for City employees. This training is provided on at least a biennial basis to comply with the general permit.

Measure of Effectiveness

Information on training is provided under BMP 6G.

BMP 3E Mapping of Permitted Stormwater Discharges

The City continues to obtain updated information annually on state-permitted stormwater discharges within the City limits and maintains a map of these discharges. The purpose of this BMP is to provide field operations staff with a visual tool for identifying permitted and non-permitted discharges.

Measure of Effectiveness

A current map and table of state-permitted stormwater discharges, current as of April 2016, is located in Appendix C.

BMP 3F Prohibition of Outdoor Cleaning of Restaurant Equipment

The City continues to include in the Special Use Permit (SUP) issued for restaurant facilities a standard condition that states: “Kitchen equipment shall not be cleaned outside, nor shall any cooking residue be washed into the streets, alleys, or storm sewers.”

Measure of Effectiveness

A sample of an approved SUP with the appropriate language regarding restaurant equipment is found in Appendix C (DSP2014-00007 for Robinson Terminal North: Section Z, Condition #125, and page 29).

BMP 3G Storm Sewer System Map

The City has developed a storm sewer system map showing all features required in the MS4 permit, including all stormwater outfalls discharging to the waters of the Commonwealth, pipes, catch basins, and inlets. The map provides a valuable tool to fully understand the storm system and aids in investigating and eliminating possible illicit discharges. The City shall continue to identify physical

interconnections with other regulated MS4s and notify in writing any downstream regulated MS4 to which the City is physically interconnected.

Measure of Effectiveness

Updates to the storm sewer map are completed as redevelopment occurs. The most current storm sewer map and associated outfall table will be provided in the PY4 annual report and update to PY4 program plan. The City did not identify any new interconnections this reporting period.

BMP 3H Dry Weather Outfall Screening and Illicit Discharge Investigations

During PY3, dry weather outfall screening was performed on 50 outfalls per the City's IDDE manual. A table documenting the outfall inspections and observations in PY3 can be found in Appendix C. The City also handled 44 water quality or possible illicit discharge complaints or incidents through its T&ES-Stormwater and EIU reporting mechanisms described in BMP 3A above.

Measure of Effectiveness

A detailed report of outfall field screening and possible issues noted at the outfall during the screening can be found in Appendix C.

3.4 Construction Site Stormwater Runoff Control (MCM #4)

The following table is a summary of activities for Minimum Control Measure #4 and their completion status. Additional detail is provided in the table below and in Appendix D.

BMP	Year	Measurable Goal	Status
4A Maintain DCR Erosion and Sediment Control Program Consistency			
Maintain E&SC program consistency with State regulations.	All	Document the City program consistency with state law and regulations.	✓ Complete
4B VSMP Permits for Construction Activities			
Modify site plan checklists to include SWPPP requirements.	PY	Provide copies of modified checklists.	✓ Complete
Applicable land-disturbing activities must submit a SWPPP for review and approval to obtain coverage under the Construction General Permit.	PY2 - On	Provided adopted Environmental Management Ordinance with new requirement.	✓ Complete

BMP	Year	Measurable Goal	Status
4C Site Inspections and Tracking for Land Disturbing Activities			
Collect all required information on land disturbing activities.	All	Summarize annual land disturbing activities.	✓ Complete
Perform site inspections	All	Document total number of inspections; provide a summary of enforcement actions included number and type.	✓ Complete
4D Citizen Complaint Reporting Mechanism			
Maintain citizen complaint tracking system.	All	Provide a summary of complaints.	✓ Complete

BMP 4A Maintain DCR Erosion and Sediment Control Program Consistency

The City's Erosion and Sediment Control Program continues to be consistent with the Virginia Erosion and Sediment Control Law (VESCL) and attendant regulations. In the last permit cycle (PY2), the City reviewed the Erosion and Sediment Control (E&SC) Ordinance for consistency with the Environmental Management Ordinance (EMO) and adopted the appropriate amendments to the E&SC ordinance.

Measure of Effectiveness

During PY1 the City formalized its policies and procedures for the program, which are included in Appendix D of the MS4 Program Plan and were submitted to DEQ with the local VSMP application. Following review of the E&SC ordinance, the City amended the language for consistency with the EMO. The City Council adopted the amendments on June 10, 2015.

BMP 4B VPDES Construction General Permit

Effective July 1, 2014, applicable construction sites had to submit stormwater pollution prevention plans (SWPPP) to the City for review and approval in order to secure coverage under the General VPDES Permit for Stormwater Discharges Associated with Construction Activities prior to final site plan release. This requirement is found in Sec. 13-111 of the EMO. The City also revised the plan review checklist and plan review standard conditions to reflect this requirement. Below is a screen capture about the VSMP on the City's website.

Virginia Stormwater Management Program (VSMP)

The City administers the Virginia Stormwater Management Program (VSMP) during the site plan process for development and redevelopment projects. This includes review and approval of Stormwater Pollution Prevention Plans (SWPPPs) for coverage under the Virginia Pollutant Discharge Elimination System (VPDES) Construction General Permit for land-disturbance projects.

Page updated on Mar 23, 2016 at 4:16 PM

ON THIS PAGE

- [Virginia Stormwater Management Program \(VSMP\) and Construction General Permit](#)
- [Environmental Management Ordinance](#)
- [Erosion and Sediment Control Ordinance](#)
- [Other Virginia Pollutant Discharge Elimination System Permits](#)

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The City is serious about water quality. One way we show it is by taking a proactive role in protecting and restoring our water resources is through enforcing and complying with local, state, and federal regulations. While Alexandria's geographical location means that pollutant loadings within our waterways are influenced by upstream activities beyond our jurisdictional boundaries, the City continues its commitment to protect and enhance instream water quality through many programmed activities.

Virginia Stormwater Management Program (VSMP) and Construction General Permit

As required by the new VSMP regulations, the City began administering the VSMP locally effective July 1, 2014. This includes 'Chesapeake Bay Land-Disturbing Activities' of greater than or equal to 2,500 square feet and less than one acre, while land disturbing activities of 1 acre or greater except for detached single family homes within or outside a common plan of development or sale, are required to apply for coverage under the VPDES construction general permit.

For a detailed description on how to apply for a permit and the fees associated with different land disturbance activities, please see [Memo to Industry 08-14](#). The memo includes information such as when fees are due, the schedule for permit review and approval, and how to renew, modify or terminate a permit.

To apply for coverage, a VPDES Construction General Permit [Registration Statement](#) and a Stormwater Pollution Prevention Plan (SWPPP) must be submitted to the City during the plan review process when applying for coverage under the VPDES construction general permit. Before closeout and when applicable, the project must also submit a [Notice of Termination \(NOT\)](#) to the City and schedule an inspection with Construction Management & Inspection (CM&I) section before the NOT can be approved and processed. For more information on Construction General Permits or to view a copy of the 2014 General Permit for Discharges of Stormwater from Construction Activities (effective July 1, 2014), visit the [Virginia Department of Environmental Quality's Construction General Permit webpage](#) or read the above Memo to Industry.

Measure of Effectiveness

Plan review and site inspection policies and procedures can be found in Appendix D of the MS4 Program Plan. The City amended the language in the Erosion and Sediment Control Ordinance to be consistent with the EMO in June 2015. The amended Erosion and Sediment Control Plans Ordinance (partial) is included in Appendix E.

BMP 4C Site Inspections and Tracking of Land Disturbing Activities

The City is required to report the number of regulated land disturbing activities and total disturbed acreage annually. Additionally, the City is required to report the total number of site inspections, and a summary of enforcement actions including the total number and type of action.

Measure of Effectiveness

In addition to providing reporting of land-disturbing activities per the general permit, DEQ requires annual reporting of related VSMP information quarterly and annually. Section 13 provides a summary of annual land disturbing activities and total disturbed acreage.

The City performed a total of 1,362 onsite inspections. As described in the MS4 Program Plan, T&ES-C&I inspectors perform other duties beyond E&SC inspections. For this reason, inspectors may visit a site up to two times daily. During this time, inspectors may provide verbal direction regarding E&SC and stormwater measures. This verbal direction is considered formal, but may not always be documented formally in an inspection report unless a required inspection and report is due, or if a major corrective action is required. Due to this enhanced oversight, City inspectors provide continual direction which tends to keep a site in order and not create the need for enforcement action. However, enforcement action was necessary and was used in the form of five Stop Work Orders and other enforcement actions that are summarized below.

Project No.	Address	Date	Issue	Action	Remedy
Building Permit	209 E. Oxford Ave.	7/5/2015	Tracking Dirt/Debris from Project	Stop Work Order	Directed to Install Construction Entrance
GRD2015-00027	306 & 308 Mount Vernon Ave.	9/28/2015	Failure to Install Erosion and Sediment Controls per Approved Plan	Stop Work Order	Controls Installed and Contractor released to work
GRD2015-00033	11 W. Bellefonte Ave.	6/18/2016	Exceeded Allowable 2500 Sq. Ft. Disturbed Area	Stop Work Order	Complied by obtaining an approved Grading Plan
DSP2013-00007	1199 S. Washington St.	4/22/2016	Sediment released into Hunting Creek/RPA	Stop Work Order	Complied with directive to Vacuum Storm Structure & Reinstall Inlet Protection
DSP 2014-00011	3737 Seminary Rd.	6/15/2016	Failure to address previous notice deficiencies	Enforcement Action	SWPPP Operator was directed to produce photo documentation of corrections made to deficient items.

BMP 4D Citizen Complaint Reporting Mechanism

As with complaints other public complaints for water quality issues, residents may use *Call.Click.Connect* or the Nuisance Abatement Hotline to file erosion and sediment control complaints. Citizens may also contact T&ES-C&I staff directly. Complaints are logged into Cityworks™ for tracking. Calls to the T&ES-C&I are logged into the Permit Plan software database (shown below).

Tidemark Advantage [Jeremy Hassan - J.H.]

File Edit Options Window Help

Exit New Open Task List GEE GIS Close View Add Delete Sign Off Print Document

Fire Code Complaint -- FIR2013-00523 Status CLO

Name: 660 684 S PICKETT ST LLC Updated: 5/3/2013 ALB
Address: 666 S PICKETT ST Master #: FIR2013-00523
Description: Project: COOKING OIL SPILL FIR2013-00523
Employee spilled cooking oil in rear alley of business when attempting to dump into Valley Proteins waste container. Employee failed to notify manager. Admitted to spilling oil on
Map: 067.02 Blk: 02 Lot: 19 Zoning: CG Tract: 2004.05

Complaint Name: Hotline Call: No
Complaint Phone: Target Area: NA
Complaint Address: COA: No
Referred To: Inspection Type: PROACTIVE (NIGHT)

Dates
Case Open Date: 05/03/13
Case Close Date: 05/08/13

Activity for FIR2013-00523

Description	Menu Code	Date1	Date2	Date3	Assigned To	Disp	Done By	Notes	Created Date	IVI
Initial Inspection	A100	5/3/2013	5/3/2013	5/2/2013	ALB	FAIL	ALB	Employee spilled cooking oil in rear alley of business when attempting to dump into Valley Proteins waste container. Employee failed to notify manager. Admitted to spilling oil on	05/03/2013	
Re-Inspection	A120	5/3/2013	5/3/2013	5/8/2013	ALB	PASS	ALB	Spill cleaned with product removed. No further FMO action required.	05/03/2013	
Case Closed	A250			5/8/2013	ALB	CMPL	ALB	Spill cleaned with product removed. No further FMO action required.	05/09/2013	

View/Add Activities

Measure of Effectiveness

Section 12 provides a summary of possible illicit discharges which includes construction site complaints and a narrative on how each discharge was controlled or eliminated. Tracking and reporting of illicit discharges and dumping are discussed in BMP 3A.

3.5 Post Construction Stormwater Management (MCM #5)

The following table is a summary of activities for Minimum Control Measure #5 and their completion status. Additional detail is provided after the table and in Appendix E.

BMP/Task	Year	Measurable Goal	Status
5A Stormwater Facility BMP Inventory			
Maintain an updated electronic BMP database for reporting.	All	Provide a table and electronic spreadsheet of all BMPs brought online during the reporting period.	✓ Complete
5B Stormwater Facility BMP Maintenance Agreements and Guidelines			
Require the proper execute and recordation of BMP maintenance agreements.	All	Provide a sample of a properly executed and recorded BMP agreement.	✓ Complete
5C Implement Bay Act and Local VSMP Authority			
Continue to implement the Environmental Management Ordinance.	All	Comply with DEQ Bay Act reporting and review requirements and implement the ordinance.	✓ Complete
5D Stormwater Facility BMP Design Guidelines			
Require adherence to Virginia BMP Clearinghouse and Virginia BMP Handbook.	All	Ensure design is consistent with VSMP regulations and summarize any changes to standards.	✓ Complete
5E Public Stormwater BMP Facility Inspection and Maintenance			
Inspect public BMP facilities for proper operation at least once annually.	All	Document the number of BMPs inspected each year and provide summary information.	✓ Complete
5F Private Stormwater BMP Facility Inspection and Enforcement			
Inspect all BMP facilities for proper operation at least once during the permit period.	All	Document total number of inspections completed, and the number of enforcement actions, when applicable.	✓ Complete

BMP 5A BMP Data Tracking System

The City continues to track all stormwater facility BMPs installed in the City and to collect information required by the general permit, including unique ID, type of facility, location, HUC, and date of last inspection.

Measure of Effectiveness

During PY3, 12 BMPs were installed in the City. All required information for the new facilities brought online is provided in Appendix G. A map of the City's BMPs is provided in Appendix E.

BMP 5B Stormwater Facility BMP Maintenance Agreements and Guidelines

The City continues to require the execution and subsequent recordation of stormwater BMP maintenance agreements to ensure long term operation and maintenance of new BMPs. In addition, staff has also created a BMP maintenance vendors list for use by facility owners and operators.

Measure of Effectiveness

A sample BMP maintenance agreement that was submitted in PY3 is located in Appendix E and a link to download the form is provided on the City's website as shown. An example of the letter and sample maintenance information sent to single-family residential BMP owners in PY3 is also located in Appendix E.

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Environmental Quality Forms
Page updated on Nov 2, 2015 at 4:03 PM

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- [Related Links](#)
- [Environmental Policy](#)

Forms

- [Application for Asbestos Affidavit](#)
- [Application for Noise Ordinance Affidavit](#)
- [Application for Noise Variance Permit: Construction](#)
- [Application for Noise Variance Permit: Music and Sound Amplification](#)
- [City Standard Data Blocks \(Project Description and Miscellaneous\) >In Microsoft Word format](#)

Stormwater Management / BMP Facilities Operation and Maintenance Agreement

- [Standard BMP Maintenance Agreement](#) (For development projects meeting the grandfathering criteria set forth in the [Environmental Management Ordinance](#))
- [Stormwater Management / BMP Facilities Operation and Maintenance Agreement](#) (For all other development projects)
- [Instructions for Preparing Stormwater Management / BMP Facilities Operation and Maintenance Agreement](#)

Stormwater Management / BMP Maintenance Schedule and Guidelines

- [Bioretention Area Maintenance Schedule and Guidelines](#)
- [Constructed Wetlands Maintenance Schedule and Guidelines](#)
- [Dry Detention Basin Maintenance Schedule and Guidelines](#)

BMP 5C Implementation of Bay Act and Local VSMP Authority

The City amended the Environmental Management Ordinance (EMO) for consistency with the new VSMP regulations, and maintained consistency with the Chesapeake Bay Act requirements. The City received provisional approval as a local VSMP authority effective July 1, 2014 and received full approval in November 2014.

Measure of Effectiveness

A copy of the approval letter designating the City as a local VSMP authority is provided in Appendix E.

BMP 5D Stormwater Facility BMP Design Guidelines

Section 13-109 of the EMO, requires that development and redevelopment projects subject to VSMP Part II.B technical criteria conform to the design specifications of the Virginia BMP Clearinghouse for stormwater facility BMPs, and utilize the Virginia Runoff Reduction Method spreadsheet to demonstrate compliance with water quality and quantity requirements. Grandfathered projects and those meeting the “time limits” associated with coverage under the construction general permit are subject to the Part II. C technical criteria and may use stormwater facility BMPs previously approved by the City and adhere to the design guidelines in the Alexandria Supplement to the Northern Virginia BMP Handbook. The City has also adopted a Green Building Policy to encourage development to meet green building standards such as LEED certification or equivalent, which includes incentives to comply with stormwater management requirements by implement Low Impact Development (LID) or Green Infrastructure (GI) techniques.

The City adopted combination of homeowner outreach and education this is implemented for owners of stormwater facility BMPs on individual residential lots.

Measure of Effectiveness

The adopted ordinance is provided in Appendix E of this annual report, and the MS4 Program Plan submitted with this annual report under separate cover. A copy of the letter and sample materials sent to individual residential lot owners regarding BMP maintenance is also provided in Appendix E.

BMP 5E Public Stormwater Facility BMP Facility Inspection and Maintenance

Pursuant to the general permit, the City inspects public facilities at least once every year. The inspections are performed according to the written policies and procedures outlined in the MS4 Program Plan. The City currently owns and operates a total of 95 stormwater facility BMPs. All were inspected during PY3.

Measure of Effectiveness

A summary of inspection results are provided in Appendix E. When the inspection resulted in a “Maintenance required” result, approximately half will have maintenance by the beginning of

December. The remaining BMPs will be scheduled for maintenance by the end of the PY4 permit cycle.

BMP 5F Private Stormwater Facility BMP Facility Inspection and Enforcement

Pursuant to the general permit, the City inspects privately-owned stormwater facility BMPs at least once every five years. Per Section 13-109 of the EMO, facility owners must perform periodic inspection and required maintenance to ensure the long-term functioning of the facilities as originally designed to protect water quality.

Measure of Effectiveness

A summary of the total number of inspections completed, and the number of enforcement actions, when applicable, are provided in Appendix E.

3.6 Pollution Prevention/Good Housekeeping for Municipal Operations (MCM #6)

The following table is a summary of activities for Minimum Control Measure #6 and their completion status. Additional detail is provided after the table and in Appendix F.

BMP	Year	Measurable Goal	Status
6A Environmental Stakeholder Groups			
Participate in EIU meetings.	All	Provide sample EIU meeting agenda.	✓ Complete
Water Quality Steering Committee	All	Provide sample WQSC meeting agenda.	✓ Complete
Water Quality Work Group	All	Provide sample WQWG meeting agenda.	✓ Complete
6B Stormwater Pollution Prevention Plans for Municipal High-Priority Facilities			
Identify high-priority municipal facilities requiring a SWPPP	PY1	List of high-priority facilities	✓ Complete
Develop and implement SWPPPs for high-priority facilities	PY4	Summary on development and implementation of required SWPPPs	✓ Complete
6C Street Sweeping and Leaf Program			
Continue the City's street sweeping program.	All	Document lane miles swept and cubic yards of debris collected.	✓ Complete

BMP	Year	Measurable Goal	Status
Continue the Leaf Collection program	All	Document amount of leaves collected.	✓ Complete
6D Catch Basin and Inlet Cleaning Program			
Continue the City's catch basin and inlet cleaning program.	All	Document the number of catch basins and inlets cleaned.	✓ Complete
6E Employee Compliant Reporting Program			
Continue to implement the "Report a Problem" program.	All	Document ongoing implementation.	✓ Complete
6F Turf and Nutrient Management Plans			
Identify locations requiring the development and implementation of NMPs	PY1	List of applicable locations requiring NMPs	✓ Complete
Develop and implement NMPs for applicable lands based on permit schedule	PY2 – On	Summary on development and implementation of NMPs	✓ Complete
6G Pollution Prevention Training			
Conduct biennial employee training.	All	A summary report on the required training, including a list of training events, the training date, the number of employees attending training and the objective of the training.	✓ Complete
6H Pollution Prevention Protocols and Inspections			
Develop and implement Standard Operating Procedures for Daily Operations	PY2 – On	Include the SOPs in the MS4 Program Plan and document any updates.	✓ Complete (No updates to SOPs required)
6I Contractor Oversight			
Ensure proper procedures and controls are implemented by City contractors.	PY1 – On	Document any changes to process or procedures.	✓ Complete

BMP 6A Environmental Stakeholder Groups

The Fire Department's Environmental and Industrial Use Unit (EIU) acted as lead with representatives from all City departments to meet during PY3 to help coordinate environmental issues,

including water quality investigation, enforcement, and documentation. The Water Quality Steering Committee (WQSC) either meets or provides updates monthly to address policy issues related to stormwater based on recommendations from Water Quality Work Group (WQWG) monthly meetings.

Measure of Effectiveness

Sample EIU, WQSC and WQWG meeting agendas are included in Appendix F.

BMP 6B Stormwater Pollution Prevention Plans for Municipal High-Priority Facilities

The City identified high-priority municipal facilities that have a high potential of discharging pollutants during PY1 per the permit schedule. Identifying high-priority facilities is the first step in listing municipal facilities that would require the development and implementation of a site-specific stormwater pollution prevention plan (SWPPP). Based on discussions with staff and additional site visits, the original list generated in PY1 has been updated to reflect those high-priority facilities requiring SWPPPs.

Measure of Effectiveness

The PY3 list of high-priority facilities is provided below and is provided under BMP 6B in the Program Plan. In order to meet the June 30, 2017 deadline for development and implementation of all required SWPPPs, the City plans to develop and implement SWPPPs during each reporting period. See the table below for SWPPPs that have been developed and implemented during this reporting period. Where reasonable, the SWPPPs were developed based on location and all City activities at the location were included in the same SWPPP document.

Division	Facility*	Facility Location	Site Activity	SWPPP Due	SWPPP Complete Date	SWPPP Location
Transportation and Environmental Services						
Transportation	Transportation Division Sign Shop	3220 Colvin Street	Material and Equipment Storage	PY4		
Resource Rec.	Household Hazardous Waste (HHW)	3224 Colvin Street	Waste Storage and Transfer	PY4	PY2	Onsite materials storage shed
Maintenance, SW	Equipment and Materials Storage ¹	133 South Quaker Lane	Vehicle, Material and Equipment Storage	PY4		
Maintenance, Streets	Lower Property Yard ²	Across from 133 South Quaker Lane	Material and Waste Storage	PY4		
Maintenance, Streets	Field Operations Center ³	2900-B Business Center Drive	Vehicle, Material and Equipment Storage	PY4	PY3	Administration Desk for T&ES (Karen Giuseppe)
Maintenance, Streets	Composting Facility	4125 Eisenhower Avenue	Material Storage	PY4		
Transportation	Transportation Division Impound Lot	5249 Eisenhower Avenue	Vehicle Storage	PY4		
General Services						
Fleet	Fueling Station	3550 Wheeler Avenue	Vehicle Fueling and Fuel Transfer	PY4		
Fleet	Vehicle and Equipment Maintenance Center ⁴	133 South Quaker Lane & Wheeler Ave	Vehicle, Material and Equipment Storage	PY4		
Fleet	Impound Lot	3000 Business Center Drive	Vehicle Storage	PY4		
Recreation, Parks and Cultural Activities						
Park Ops	Equipment and Materials Storage ¹	133 South Quaker Lane	Vehicle, Material and Equipment Storage	PY4		
Park Ops	Lower Property Yard ²	across from 133 S. Quaker	Material and Waste Storage	PY4		
Park Ops & Natural Res.	Field Operations Center ³	2900-A Business Center Drive	Vehicle, Material and Equipment Storage	PY4	PY3	Administration Desk for RCPA (Aaron March)
Fire Department						
Maintenance	Vehicle Maintenance Bay ⁴	133 South Quaker Lane & Wheeler Ave	Vehicle, Material and Equipment Storage	PY4		

BMP 6C Street Sweeping and Leaf Collection Programs

The City continues to implement a City-wide street sweeping program to remove possible sources of nutrients, sediment, and impacts to Biological and Chemical Oxygen Demand in order to protect local waterways, the Potomac River and the Chesapeake Bay. Additionally, collected leaves are turned to mulch and provided to for use on residential lawns; which decreases the use of fertilizers.

Measure of Effectiveness

The City swept approximately 4,305 lane miles in PY3. The amount of street lane miles swept changes slightly each year depending on weather conditions and other factors.

The City's Curbside Leaf Collection program performed the following:

1. Distributed approximately 43,300 biodegradable bags to various locations throughout city facilities.
2. Collected 16,072 biodegradable bags and collected 16,408 cubic yards of curbside vacuumed leaves to be recycled for mulch distribution spring 2016.
3. There were 27,228 bio bags uncollected or approximately 63%.
4. Approximately 1,160 cubic yards (an increase of 300 cubic yards from last permit year) came from Community Landscaping in Park Fairfax.
5. Total cubic yards collected: 35,205
6. The number of bags distributed and collected decreased in this permit year as compared to last permit year. One factor influencing the decrease in collected bags is likely the fact that many of the leaves did not fall heavily during the leaf collection time frame. In December, there were still a significant amount of leaves on trees.

BMP 6D Catch Basin and Inlet Cleaning Program

The City continued to implement a City-wide catch basin and inlet cleaning program.

Measure of Effectiveness

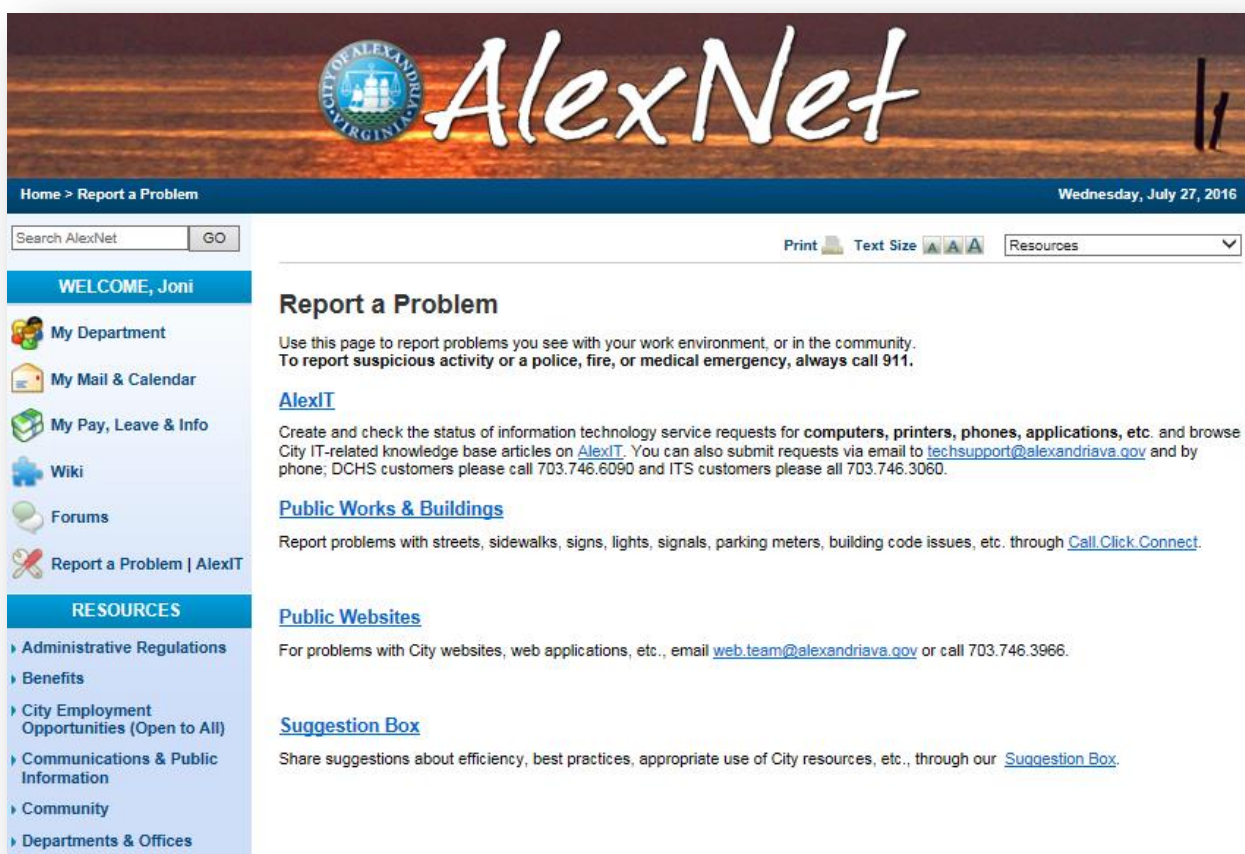
The City cleaned approximately 1,570 catch basins and inlets in PY3 out of approximately 9063 inlets, 651 catch basins, 961 combined inlets, and 192 combined catch basins in the City.

BMP 6E Employee "Report a Problem" Program

The City continues to implement the "Report a Problem" program to empower employees to report problems, to include illicit discharges or issues with the functioning of City assets. The program provides a way of reporting problems associated with City infrastructure, including stormwater management.

Measure of Effectiveness

A screen shot of the "Report a Problem" program from the City's intranet is provided below and in Appendix F.



BMP 6F Turf and Nutrient Management

The permit requires that that City develop and implement Turf and Landscape Nutrient Management Plans (NMPs) for municipal properties over one acre contiguous where nutrients are applied. The NMPs must be developed according to the permit schedule.

Measure of Effectiveness

The City updated several of its NMPs in PY3. As a result, the City's development and implementation of NMPs for applicable lands exceeds the 40% requirement in the general permit to be met by June 30, 2016. The updated list and information for completed plans is presented below, which includes the location of the NMPs.

Facility	Street Address	Latitude	Longitude	Ac.	Plan (Y/N)	Date of Plan	Total
Joseph Hensley Park	4200 Eisenhower Avenue	38°48'12"N	77° 6'29"W	6.04	Y	6/18/2017	12.48%
Ben Brenman Park	4800 Duke Street	38°48'30"N	77° 6'52"W	1.70	Y	6/18/2017	3.51%
Simpson Park	426 East Monroe Street	38°49'18"N	77° 3'4"W	5.34	Y	6/18/2017	11.04%
Four Mile Run Park	3700 Commonwealth Avenue	38°50'24"N	77° 3'34"W	6.11	Y	6/18/2017	12.63%
Waterfront Park	1A Prince Street	38°48'12"N	77° 2'21"W	1.00			0.00%
Founders Park	351 North Union Street	38°48'27"N	77° 2'20"W	5.10			0.00%
Windmill Hill Park	501 South Union Street	38°47'58"N	77° 2'30"W	4.30			0.00%
Rivergate Park	2 Montgomery Street	38°48'46"N	77° 2'17"W	1.57			0.00%
Montgomery Park	200 Montgomery Street	38°48'51"N	77° 2'27"W	1.09			0.00%
Oronoco Bay Park	100 Madison Street	38°48'40"N	77° 2'23"W	4.61			0.00%
Miracle Field	1001 Jefferson Street	38°47'53"N	77° 3'10"W	1.59			0.00%
President Gerald Ford Park	1426 Janneys Lane	38°49'1"N	77° 5'20"W	1.01			0.00%
Armistead Booth	520 Cameron Station Boulevard	38°48'18.9"N	77°07'37.5"W	2.56	Y	6/18/2017	5.29%
Luckett Field	3540 Wheeler Avenue	38°48'26.3"N	77°05'22.8"W	1.31	Y	6/18/2017	2.71%
Braddock Park	1005 Mt. Vernon Ave.	38°49'15.6"N	77°03'13.4"W	5.05	Y	2/18/2018	10.44%
			Total	48.38			58.10%

BMP 6G Pollution Prevention Training

The City conducted the biennial training for field personnel on Recognizing and Reporting Illicit Discharges in PY3. As outlined in the training schedule of BMP 6H in the MS4 Program Plan, the biennial Stormwater Pollution Prevention Training will be held in PY4. The City must include a summary of training or certification provided to emergency response employees in accordance with permit Section II.B.6.d.(8).

Measure of Effectiveness

The SWM Division continues to provide annual training in compliance with the City's MS4 permit. In PY3, the SWM Division provided four separate training sessions on Recognizing and Reporting Illicit Discharges to over 100 City staff in multiple departments/divisions. This training was provided to Code Administration, T&ES Public Works Services, RPCA Facilities and Operations staff, and T&ES Construction and Inspection.

A summary table presenting the training given during PY3 can be found below. It includes the training group, subject, date of training, location of training, and number of participants. Sign-in sheets are provided in Appendix F.

Group	Subject	Date	Location	# of Participants
Code Administration	IDDE	4/18/2016	301 King Street	23
T&ES – Public Works Services	IDDE	5/17/2016	BCD Training Room	45
RPCA	Recognizing and Reporting Illicit Discharge	6/8/2016	BCD Training Room	26
T&ES – Construction and Inspection	IDDE and VSMP	6/17/2016	BCD Conference Room	7

BMP 6H Standard Operating Procedures for Daily Operations

The permit requires the City to develop and implement pollution prevention SOPs for Daily Operations by June 30, 2015.

Measure of Effectiveness

The SOPs for Daily Operations are included in Appendix F of the MS4 Program Plan (provided under separate cover and submitted with this annual report) for those applicable operations. No current SOPs required updating during PY3.

BMP 6I Contractor Oversight

The City continues to ensure that contractors working on behalf of the City follow procedures and employ required control measures. SOPs for pesticide and herbicide application place requirements on

contractors. City employees charged with oversight of City capital projects receive annual water quality training. The City will continue to implement this BMP and report on changes annually.

Measure of Effectiveness

No changes were made to the process during the reporting period.

4 Evaluation and Assessment of BMPs

In accordance with Part II E 3 b of the General Permit, the City has reviewed and assessed the BMPs established to meet the requirements of the City's permit and have found them to be appropriate and effective.

5 Results of Information Collected and Analyzed

No information, including monitoring data, was required to be collected or analyzed under the City's permit.

6 Summary of Permit Year 4 Planned Activities

Part II E 3 of the General Permit requires a summary of the stormwater activities the City plans to undertake during the next reporting cycle. The following table summarizes by minimum control measure the planned activities to meet PY4 requirements of the MS4 permit. This includes those necessary to meet the schedule in Table 1 of the permit, which are in addition to ongoing activities in this annual report.

BMP/Task	Year	Planned Activity
Minimum Control Measure #1 – Public Education and Outreach		

<p>Permit Section II B 1</p>	<p>PY3 – On</p>	<p>Implement the Public Education and Outreach Plan</p> <p>1. Chesapeake Bay nutrients</p> <ul style="list-style-type: none"> • Prepare and distribute two messages that address seasonally-specific stormwater pollution prevention tactics for nutrients; distributed via electronic email to the City-wide eNews list serve • Include a message on social media about the proper use and application of fertilizer. • Create webpage under “Stormwater Management” related to the proper application and use of fertilizers to protect water quality, and include a link to the NVRC www.onlyrain.org website. • Continue to air on both the government access channel (Channel 70) and the community access channel (Channel 69). • Distribute brochures through direct mail to 33% of HOA and condominium contacts about the proper use and application of fertilizers, and how to ensure that contractors are following best practices to protect water quality. • Participate in the NVRC Clean Water Partners efforts. • Annually distribute brochures through direct mail to 33% of lawn care and maintenance companies licensed to do business in the City. <p>2. Bacteria from pet waste</p> <ul style="list-style-type: none"> • Prepare and distribute two messages stressing the importance of picking up after pets and disposing of the waste properly via electronic email to the City-wide eNews list serve. • Include a message on social media about the picking up after pets and properly disposing of the waste. • Revise the website related to bacteria from pet waste and insert a link to the NVRC www.onlyrain.org website. • Maintain current pet waste stations and install new pet-waste stations where appropriate to make pick-up and disposal more convenient. • Continue distributing the revised Pet Waste brochure at all appropriate events. • Continue distributing the pet waste brochure (using the updated version) at the Animal Shelter. • Distribute educational materials at VCA (Duke and OT) and Old Towne School for Dogs. • Continue to participate in the NVRC Clean Water Partners regional efforts. • Explore the possibility of including a message on the Animal Shelter online licensing webpage. http://alexandriaanimals.org/pet-licensing-now-online/
<p>Minimum Control Measure #1 – Public Education and Outreach cont.</p>		

Permit Section II B 1	PY3 – On	<p>3. Illicit Discharges and Illegal Dumping</p> <ul style="list-style-type: none"> • Prepare and distribute two general messages via electronic email to the City-wide eNews list serve. • Include a message on social media about illicit discharges and illegal dumping. • Create webpage under “Stormwater Management” related specifically to illicit discharges and illegal dumping for the targeted businesses and the general public, and include a link to the NVRC www.onlyrain.org website. • Continue to air PSAs throughout the year on both the government access channel (Channel 70) and the community access channel (Channel 69). • Continue to participate in the NVRC Clean Water Partners regional efforts focused on nutrients. • Annually distribute brochures through regular mail to 33% of the targeted businesses on best practices to protect water quality. <p>4. General Public Education</p> <ul style="list-style-type: none"> • Continue to distribute brochures and other educational materials at events. • Continue to present education materials to school and civic groups. • Continue to distribute eNews to provide general stormwater education and to announce events and volunteer opportunities. • Continue to participate in the NVRC Clean Water Partners regional efforts.
Minimum Control Measure #2 – Public Involvement / Participation		
Permit Section II B 2	PY1 – On	Post each annual report and program plan updates on the City’s dedicated website.
Minimum Control Measure #3 – Illicit Discharge Detection and Elimination		
Permit Section II B 3	PY1 – On	Implement written IDDE procedures.
Permit Section II B 3	PY1 – On	Perform annual dry weather outfall screening on 50 outfalls.
Permit Section II B 3	PY1 – On	Identify new physical interconnection and notify neighboring MS4 permittees as applicable.
Minimum Control Measure #4 – Construction Site Stormwater Runoff		
Permit Section II B 4	PY1 – On	Implement written inspection and enforcement procedures.
Minimum Control Measure #5 – Post Construction Stormwater Management		
Permit Section II B 5 c (1) (d)	PY1 – On	Implement Individual Residential Lot Special Criteria.
Permit Section II B 5	PY1 – On	Implement Operator-Owned Stormwater Management Inspection Procedures.
Permit Section II B 5	PY1 – On	Ensure training and certification for appropriate staff.

Minimum Control Measure #6 – Pollution Prevention and Good Housekeeping		
Permit Section II B 6 b	PY2 – On	Develop Daily SOPs in PY2 and implement PY3 – PY5; incorporate into training.
Permit Section II B 6 b	PY4 – On	Develop and implement SWPPPs for applicable locations in order to meet the June 30, 2017 deadline; incorporate into training.
Permit Section II B 6 c (1) (a)	PY2 – On	Develop and implement nutrient management plans (NMPs) for applicable locations to meet the 40% requirement
Permit Section II B 6	PY2 – On	Implement the Training Program and Schedule.
Special Conditions – Chesapeake Bay TMDL and Other Approved TMDLs		
Permit Section I B	PY2 – On	Develop and implement action plans for TMDLs approved prior to July 9, 2008
Permit Section I B	PY3 – On	Develop and implement action plans for TMDLs approved on or after July 9, 2008
Permit Section I C	PY2 – On	Develop and implement the Chesapeake Bay TMDL Action Plan to meet 5% target reductions

7 Changes in Identified BMPs or Measurable Goals

The City's operated under the PY2 Updated MS4 Program Plan submitted with the PY2 annual report during this PY3 reporting period, which included items explicit in permit Table 1 and specific items in each minimum control measure. The City will continue to update the MS4 Program Plan according to permit Table 1 and provide a summary of the updates with the annual report.

The current version of the City's MS4 Program Plan is provided with this annual report under separate cover. The following table provides a cross-reference to the associated subsection of the Program Plan where updates are addressed.

PY4 Program Plan Updates	
<i>Section</i>	<i>Update</i>
MCM#6	BMP6F - Revised list and acreage of municipal lands requiring NMPs (added another location)
MCM#6	BMP6H – Added Standard Operating Procedures (SOP) for Invasive Species Control and Herbicide Use
Local TMDL Action Plan	Include the updated Non-Tidal Four Mile Run Bacteria TMDL Action Plan to incorporate Tidal Four Mile Run, and Hunting Creek/Cameron Run/Holmes Run TMDLs. The plan first developed and submitted in PY2 and then updated in PY3 to include the remaining bacteria TMDLs.
Chesapeake Bay TMDL Acton Plan	Include correspondence for additional information and approval of the action plan.

8 Reliance On Other Government Entities

The City continues to participate in with other localities in the Northern Virginia Regional Commission's Clean Water Partners to conduct regional public education and outreach activities, as discussed in Section 3.1.

9 Approval Status of Qualifying Local Programs

The City relies on implementation of the Erosion and Sediment Control Ordinance, mandated by the Virginia Erosion and Sediment Control Regulations (VESCR), to help satisfy Minimum Control Measure #4 - Construction Site Stormwater Runoff Control. During PY2, the City's Erosion and Sediment Control (E&SC) Ordinance was reviewed and revised for consistency with amendments to the Virginia Stormwater Management Act and the Virginia Stormwater Management Program (VSMP) Regulations, and the renumbering of these, as well as the Virginia Erosion and Sediment Control Law (VESCL) and VESCR when administration of these programs was shifted from DCR to DEQ. The adoption of amendments to the City's E&SC ordinance during PY2 are discussed in BMP 4A.

In addition, the City relies on implementation of the Environmental Management Ordinance (EMO), mandated by the Virginia Chesapeake Bay Preservation Area Designation and Management Regulations, to help satisfy Minimum Control Measure #5 - Post Construction Stormwater Runoff Control.

The City's Erosion and Sediment Control Program has been reviewed and found consistent by the Virginia Soil and Water Conservation Board. In addition, the Chesapeake Bay Local Assistance Board (now superseded by the Virginia Soil and Water Conservation Board) has also found the City's Environmental Management Ordinance to be fully consistent with state regulations.

The City VSMP Local Stormwater Management Program application included amendments to the EMO Ordinance for consistency with the new VSMP regulations and maintained the Chesapeake Bay Act requirements. The City's received provisional approval as a local VSMP authority effective July 1, 2014 and received full approval in November 2014. Documentation of approval was included in Appendix E of the PY2 Annual Report.

10 Special Conditions – Local TMDLs

The 2013 - 2018 general permit includes new special conditions to address local TMDLs with a wasteload allocation (WLA) assigned to the City and approved by the State Water Control Board (SWCB). The permit also includes new special conditions to address the Chesapeake Bay TMDL. The City's updated MS4 Program Plan carries forward existing specific actions to address pollutants of concern for impaired waters, and incorporates these new requirements as applicable.

Pursuant to Section I B of the permit, the Local TMDL Action Plans for TMDLs approved before of July of 2008 were developed during PY2 and were included in the September 30, 2015 MS4 Program Plan. Local TMDL Action Plans for TMDLS approved between July 2008 and June 2013 were completed by June 30, 2016. The City's Bacteria Action Plan completed in June 2015 was updated in PY3 to include the TMDLs approved between July 2008 and June 2013. The MS4 Program Plan includes the Local TMDL Action Plans and is submitted under separate cover with this PY3 Annual Report

Pursuant to Section I B of the permit, the City has developed the following Local TMDL Action Plans in compliance with the permit.

- City of Alexandria Bacteria TMDL Action Plan for Non-Tidal Four Mile Run was updated to incorporate Tidal Four Mile Run, and Hunting Creek/Cameron Run/Holmes Run TMDLs. The plan was first developed and submitted in PY2 and then updated in PY3 to include the remaining TMDLs with WLAs in the City.
- Tidal Potomac PCB TMDL Action Plan which was developed and submitted in PY2.

11 Special Conditions – Chesapeake Bay TMDL

The 2013 - 2018 general permit includes new special conditions to address local TMDLs with a wasteload allocation (WLA) assigned to the City and approved by the State Water Control Board (SWCB). The permit also includes new special conditions to address the Chesapeake Bay TMDL. The City's updated MS4 Program Plan carries forward existing specific actions to address pollutants of concern for impaired waters, and incorporates these new requirements as applicable.

Pursuant to Section I C of the permit, the Chesapeake Bay TMDL Action Plan for 5% Compliance was developed during PY2 and is included in Appendix A of the MS4 Program Plan to comply with the June 30, 2015 due date and submission. The MS4 Program Plan is submitted under separate cover with this PY3 annual report.

Per the City's approved Chesapeake Bay Action Plan (see Appendix B of the PY3 update to the MS4 Program Plan) demonstrates that the City has surpassed the target 5% reduction goals required during the current permit cycle. Redevelopment projects continue to provide nutrient and sediment credits towards the City's overall targets. The City is currently completing design of the Lake Cook Retrofit project which was awarded Stormwater Local Assistance Fund (SLAF) grant funding from DEQ. The project is included in the 5% Action Plan, but provided reductions beyond the already achieved 5% target.

12 Illicit Discharges

The City receives reports of possible illicit discharges through the *Call.Click.Connect* web-based complaint form or call center, telephone calls, email, and the Nuisance Abatement Hotline. Complaints are handled collaboratively by T&ES, Stormwater Management and the Environmental

Industrial Unit; with the EIU taking on responsibility for tracking complaints responded to jointly through the Permit Plan database. The following provides information on all water pollution related complaints and issues tracked by the City with a narrative on how the illicit discharge was controlled or eliminated, as applicable.

Tracking ID	Date Initiated	Date Closed	Problem Address	Incident	Narrative and Result
OEQ76381	7/2/2015	7/7/2015	601 E BRADDOCK RD	Possible Oil Contamination	Upon investigation, the oily sheen water observed and tested and found to be natural bacteria sheen. An email was sent to the individual to let him know that this sheen is natural and how he can determine the difference between artificial and natural sheen in the future.
OEQ76900	7/9/2015	7/10/2015	3307 Elmore Drive	Possible Oil Contamination	Upon investigation, it was determined that the sheen was natural. The homeowner was shown how to test if sheen is natural or petroleum.
OEQ76958	7/9/2015	7/9/2015	3201 Landover Street	Contractor Washing Paint Chips into Storm drain	Upon investigation, paint chips were seen everywhere, but no active pressure washing or water running into the storm sewers. It didn't appear that any detergent was being used. The property manager was informed that he needs to have his contractor capture the paint chips before they get washed down the drain. He said they would set something up before they resumed pressure washing in the morning.
OEQ77576	7/17/2015	7/15/2015	732 TIMBER BRANCH DR	Clogged Catch Basin	Upon investigation, the catch basin was clogged with sediment. The sewer maintenance team cleaned the catch basin.
OEQ77597	7/17/2015	7/17/2015	907 CHURCH ST	Severe Erosion Issue	Upon investigation, the erosion was located at a sound wall in the VDOT Right of Way. VDOT was notified of the problem via their maintenance request website. VDOT Service Request #515671
OEQ78439	7/31/2015	7/31/2015	1600 MAIN LINE BLVD	Barrels in Retention Pond	Upon investigation, orange barrels were seen in the wet pond. The Barrels most likely originated from the construction site across the street from the pond at Potomac Yard. The C&I group and/or the contractor retrieved the barrels.
OEQ78609	8/4/2015	7/31/2015	3613 Tupelo Place	Groundwater	Upon investigation, it was determined that groundwater enters the property through a spring. There is a pipe that appears to convey groundwater from 104 Sylvan Court to 113 Fort Williams Parkway.
OEQ78922	8/10/2015	8/4/2015	4008 FORT WORTH AVE	Placing Fill in Stormwater Easement	The complaint was logged and the Stormwater Management Division sent the requester an email.

Tracking ID	Date Initiated	Date Closed	Problem Address	Incident	Narrative and Result
OEQ79662	8/21/2015	8/12/2015	1216 ROUNDHOUSE LN	Illicit Discharge - White Foam	The responsible party was Eagle Innovation, Inc. Staff told the company to stop washing until the Fire Marshal arrived. The Fire Marshal arrived and addressed the issue and educated the contractor's staff and owner. Staff also instructed the contractor to clean the gutter pan and catch basin by sweeping and disposing of the material properly.
OEQ80111	8/30/2015	9/2/2015	1 MADISON ST	Algae	The algae at the referenced location are naturally occurring this time of year and the City policy is to not interfere with the natural process.
OEQ80989	9/11/2015	6/23/2016	Monticello Park	Murky Water	Upon investigation, the murky water appear to be suspended sediment. Enterprise Rent-A-Car was running their car wash station and discharging the wash water into the storm drain. Enterprise has a general car wash permit from DEQ that allows them to discharge untreated wash water into the storm drain. Enterprise refused to show staff their permit. Staff returned the next day to view the permit. They only had the cover page on file, Permit VAG750124.
OEQ81229	9/15/2015	9/11/2015	2902 HICKORY ST	Sink Hole	The sink hole has existed in the same state for approximately 6 years. Since the hole has not changed, even with the large rains earlier this year, we do not believe that it will be a problem for the property owner to fill in the hole.
OEQ81577	9/21/2015	9/24/2015	1250 S WASHINGTON ST	Herbicides	Upon investigation, Solitude Lake Management was hired to kill the hydrilla in the Potomac River in front of the Porto Vecchio property. Mechanical methods had been tried previously, but the hydrilla came back which was why they were using the herbicides. Porto Vecchio said that they had permits to complete the work but that they didn't have copies on the premises. Solitude Lake Management had certified pesticide/herbicide applicators and applied products in compliance with the permit and manufacturer instructions. Staff spoke to DEQ. The area where the herbicides were being applied is not part of the Porto Vecchio property and is considered a "Waters of the US." The area is managed by the State of Virginia and not the City.
OEQ82563	10/7/2015	9/25/2015	104 INGLE PL	Illicit Discharge - White Substance	Staff investigated and saw the white substance in the gutter pan leading to the storm drain. We spoke to the homeowner at 104 Ingle Place and informed him that stormwater is not treated and asked him to clean the remaining group in the gutter pan using try methods. He agreed and staff followed up to ensure compliance.

Tracking ID	Date Initiated	Date Closed	Problem Address	Incident	Narrative and Result
OEQ82629	10/8/2015	10/8/2015	201 W MT IDA	White Substance in Gutter Pan	Stormwater Management personnel were driving by a property and saw a white substance in the gutter pan. Spoke to the homeowner who confirmed his contractors were cleaning their grout in the gutter pan. We asked the homeowner to please sweep the debris up and to instruct his contractor to not clean the grout equipment into the gutter pan in the future.
OEQ83773	11/2/2015	10/8/2015	3223 DUKE ST	Power Washing Paint	Stormwater Management personnel stopped contractors from power-washing yellow paint off concrete due to absence of inlet protection. Contractors immediately halted activity. They also explained that they could resume washing if inlet protection were put in place.
OEQ84052	11/6/2015	11/6/2015	5347 HOLMES RUN PWY	Water Moccasins	Nature center staff responded to the request. The snakes in Homes Run are most likely northern water snakes, which are found at Dora Kelly, and provided this information to the requester about the difference between water moccasins and northern water snakes. The northern water snake is harmless and found throughout the state of Virginia. They are often confused with the water moccasin.
OEQ85436	12/4/2015	12/7/2015	1204 Russell Road	Pool Discharge	The Fire Marshall's office called Stormwater Management personnel about a pool being dewatered. The water was being dumped onto the street which ended in the storm drain directly. Sara and Wisdom went there. Met with Jim from POTOMAC POOL SERVICE. Educated him on allowing the chlorine level to decrease and draining the water through the grass before it ends in the storm drain. That way the grass filters out some of the residual chlorine and anything that may be harmful to the receiving water body.
OEQ85973	12/11/2015	12/18/2015	500 HOLLAND LN	Muddy and Yellow Stream	Upon Investigation, a water main break was discovered. Utility Quest was on site beginning repair work on the break. Followed up with the requester.
OEQ90658	2/25/2016	2/5/2016	Monticello Park	Herbicides	Resident called to notify the Stormwater Management Division because she had seen people removing invasive species along the stream using chemical treatment. Personnel followed up with Parks to find out if that was a contractor or not. Parks confirmed that it was a contractor. No further action required.
OEQ91072	3/2/2016	2/25/2016	100 S Dove St	Milky White Discharge	Followed up on milky discharge found in creek close to the baseball field on Witter Dr. 30 inch outfall is on other side of the fence was discharging the milky substance. Found source of discharge at 100 S Dove St. Cement type mix had been dumped directly into storm drain. Asked warehouse manager to clean what was left of the cement mix as best as he could without getting any more into storm drain.

Tracking ID	Date Initiated	Date Closed	Problem Address	Incident	Narrative and Result
OEQ91388	3/7/2016	3/8/2016	3101 EISENHOWER AV	Oil Spill	Not enough information provided to investigate.
OEQ91495	3/8/2016	6/8/2016	100 S Dove St		The matter was referred to Deputy Fire Marshall
OEQ92763	3/24/2016	3/22/2016	1250 S WASHINGTON ST	Brown Scum	Upon investigation, pollen and debris was noted but not slimes or sheens. Staff asked the requester to take photographs if he sees something in the future and to call 911 if he sees oil sheen in the water.
OEQ93344	4/1/2016	3/24/2016	4519 HOLMES RUN PKWY	Milky White Discharge	Was unable to detect source of milky white discharge. Opened manholes upstream. Found some workers doing renovation work on rite-aid and store next to rite-aid. Talked to them but none took responsibility. The apartment building closest to the outfall where the discharge was detected had a floor drain that went directly into the storm drain in the past. Will do a dye test to see if that situation has been rectified.
OEQ93580	4/5/2016	4/6/2016	N Morgan and Beauregard Intersection	Copper Colored Water	Upon investigation, staff did not observe copper-colored water flowing from pipe upon arrival. Conducted pH test to determine acidity. pH test gave a value of 6.
OEQ93889	4/8/2016	4/5/2016	Dogwood and Valley Drive. Close to E Timber Branch on Braddock	Sediment Contamination	Washington Gas subcontractor working on gas line at intersection of Dogwood and Valley Dr. Water was being pumped into sediment bag which gave out and all that water containing sediment flowed into the storm drain and eventually into Timber Branch. We asked them to stop pumping water till they had sediment booms at the inlet. Also ensure they swept everything when they were done. Fire Marshall to follow up to make sure they complied.
OEQ96598	5/11/2016	4/8/2016	5200 Eisenhower Ave	Muddy Discharge	Water main break had occurred. Plumbing company was fixing the problem and had to pump out water. Initial discharge that got our attention was muddy water. Construction and Inspection staff stopped by and instructed them to have a silt bag in place. When Stormwater Management staff got there, they had the silt bag in place and continued with pumping.
OEQ97302	5/20/2016	5/11/2016	2758 Duke St	White Chalky Material	Fire Marshall was called in due to white chalky material found in storm drain. The responsible party was a granite cutting operation. The Fire Marshall issued a summons and asked responsible party to get a contractor to flush storm drain. The business owner will be billed for the flushing.

Tracking ID	Date Initiated	Date Closed	Problem Address	Incident	Narrative and Result
OEQ98312	6/3/2016	6/8/2016	Holmes Run Parkway and Chambliss	Mineral Oil	Dominion transformer was breached and spilled mineral oil. Some of it made its way into the storm drain in Fairfax County. Oil traveled through Holmes Run. Found sheen over Holmes Run in different spots. Dominion contracted HEPACO to contain the spill. They placed booms across sections of Holmes Run and will come with a vac truck to get any contaminants trapped by the booms.
OEQ98313	6/3/2016	6/3/2016	5300 Block of Holmes Run Drive	Brown Plume	Upon investigation, very little of the plume was seen. It appeared to be dirt from construction work nearby. Unable to find const work around. Caller did say there was some type of construction work going on N. Paxton earlier in the day but the contractors left. Stormwater Management staff followed up with Utility inspection group. No information available on possible responsible party.
OEQ99232	6/15/2016	6/8/2016	3558 MARTHA CUSTIS DR	Saw Cut Slurry	Utility contractor is not cleaning up their sawcut slurry. The responsible part was Utilities Unlimited and a contractor for Virginia American Water (VAW). VAW sent one of their people to verify that the waste didn't go directly into the storm drain. The contractor has been advised to clean up properly before leaving the site.
OEQ99233	6/15/2016	6/16/2016	3558 MARTHA CUSTIS DR	Saw Cut Slurry	Same complaint as above. The contractor has put inlet protection at the inlet opening and has been advised to clean up properly at the end of the shift.
OEQ99533	6/18/2016	6/20/2016	3161 MARTHA CUSTIS DR	Saw Cut Slurry	Upon investigation on Monday June 20th, an extensive amount of saw cut slurry was found throughout the project site. Because the contractor had been told on Thursday, June 16th to stop work and clean the slurry, the case was referred to the Fire Marshal. A follow-up visit was made to the site on Tuesday June 21st and the slurry was still in the process of being cleaned by brooms and a sweeper truck. The Fire Marshal has advised Utilities Unlimited that they next time there is an illicit discharge complaint; they will be issued a summons.
FIR2015-00350	7/14/2015	NA	608 MONTGOMERY ST	Grill Room Restaurant-Grease spills-improper storage of waste grease.	Issued Notice of Violation (NOV) to have alley cleaned up of grease spills. Also saw evidence of grease in storm drain. Restaurant owner denies responsibility even though there was oil spills underneath waste oil container and there was evidence of grease runoff into storm drain. T&ES staff was on the scene to witness storm drains blocked with trash and oil on the ground.

Tracking ID	Date Initiated	Date Closed	Problem Address	Incident	Narrative and Result
FIR2015-00351	7/14/2015	NA	610 MONTGOMERY ST	Haute Dogs Restaurant - waste cooking oil spill	Arrived on the scene and noticed grease on top around and underneath waste cooking oil container and a grease on the ground directly behind the restaurant. Advised representative that an immediate clean up was necessary and that grease inside the storm drain needed to be extracted by a a clean up contractor and that documentation needs to be submitted to the Fire Marshal's Office. Also cited for the restaurant to obtain secondary containment for the waste oil container. The owner's representative disputed having anything to do with the spill and stated that the City of Alexandria was responsible for flooding in the alley. He stated that the company who picks up the waste oil is responsible for the spill and they should be charged. I informed him that as the restaurant representative he is responsible for any spills behind the restaurant and that this time I would work with him and only issue a notice of violation to do the clean up. Initially he stated that he would not clean the grease inside the storm drain behind his restaurant but when I told him that the spills behind his restaurant get washed down by the rain to the other storm drain behind The Grill Room restaurant he agreed that this was possible. He finally agreed to sign the notice of violation. I informed him I would return tomorrow afternoon at 3 PM.
FIR2015-00381	7/28/2015	NA	3307 COMMONWEALTH AV 3307A	Complaint referral received from DEQ - possible fuel oil leaking into storm drain	Received email from DEQ (Alex Wardle) stating this was an anonymous complaint and that this issue has already been addressed. CASE CLOSED Tank was removed in 1998 with DEQ approval.
FIR2015-00411	8/17/2015	NA	329 MOUNT VERNON AV	Report of an illegal discharge onto alley	Spoke to property owner and explained to him that as the owner and permit holder he is responsible for making sure his contractor understands the noise ordinance guidelines and that any types of discharges from his properties onto a public or private property is not allowed.
FIR2015-00424	8/30/2015	NA	2345 MILL RD	Fuel spill	Approx. 10 gallons of gasoline spilled from a vehicle when a company was lifting a burned car onto a flatbed. Spilled liquid entered a storm drain and appears to be contained by a holding vault. Vacuum truck will suck out the spilled fuel from the vault so it won't enter the waterway.
FIR2015-00462	9/17/2015	NA	641 NOTABENE DR	Sewage line backup flowing into storm drain	15:00 Magnolia plumbing on scene vacuuming storm drain

Tracking ID	Date Initiated	Date Closed	Problem Address	Incident	Narrative and Result
FIR2015-00598	12/9/2015	NA	1904 RUSSELL RD	Discharging of pool water onto storm drain.	Met with OEQ representatives and spoke with Pool representative. Pool representative stopped what he was doing and advised homeowner of discharge requirements.
FIR2016-00172	4/26/2016	NA	802 PENDLETON ST	Illegal discharge of grout mixed water into curb	Spoke with the foreman for a remodeling company and advised him to clean up city curb from white milky residue from their discharge. He agreed and began cleanup.
FIR2016-00228	5/20/2016	NA	2754 DUKE ST	Discharging marble dust into storm drain	Issued a notice to have storm drains flushed. Owner contracted T&ES to do the work since other contractors were not available.
FIR2016-00279	6/30/2016	NA	696 JANNEY'S LA	Discharging concrete sediment into storm drain	Received a call from T&ES about a Washington Gas subcontractor who was discharging concrete sediment into storm drain.

13 Land Disturbing Activities

The following table provides an annual summary of land-disturbing activities data required to be reported under permit Section II 4.f. This data, broken down quarterly, was provided to DEQ during PY3. A total of 51 projects were active with a total of approximately 44 acres disturbed.

Reference #	Address	Project Released Date	Disturbed Acres
GRD2014-00036	210 Strand St	7/16/2015	0.1594
GRD2014-00038	5801 Quantrell Ave	8/17/2015	0.0473
GRD2015-00006	23 & 25 W Chapman St	7/20/2015	0.1783
GRD2015-00026	2707 N Rosser St	8/27/2015	0.3632
GRD2015-00027	306 & 308 Mt Vernon Ave	7/29/2015	0.1519
GRD2015-00043	1200 N Quaker Ln	8/13/2015	0.5000
GRD2015-00045	407 Jackson Place	7/10/2015	0.2187
GRD2016-00003	2600 Main Line Blvd	9/28/2015	0.7100
GRD2016-00004	134 Sylvan Ct	9/22/2015	0.2135
DSP2012-00019	220 S Union St	7/9/2015	0.8240
DSP2013-00021	206-212 S Patrick St	8/17/2015	0.2979
DSP2014-00004	100 S Pickett St	7/29/2015	2.4709
DSP2014-00011	3737 Seminary Rd	8/18/2015	2.4900
GRD2015-00034	607 & 607A Ramsey St	12/4/2015	0.1346
GRD2015-00037	5447 Fillmore Ave	11/9/2015	0.2038
GRD2015-00039	2 Duke St	12/14/2015	3.6000

Reference #	Address	Project Released Date	Disturbed Acres
GRD2015-00042	2901 Main Line Blvd	10/26/2015	2.4400
GRD2015-00044	5307 Pender Ct	10/6/2015	0.3394
GRD2016-00007	2436 Ridge Rd Dr	11/23/2015	0.4197
GRD2016-00008	3601 Jefferson Davis Hwy	12/15/2015	0.0480
DSP2013-00003	450 S Pickett St	11/6/2015	7.5100
DSP2013-00027	1333 Powhatan St	10/22/2015	1.3397
DSP2014-00012	4800 Fillmore Ave	10/21/2015	1.7980
GRD2016-00006	2802 Russell Road	1/8/2016	0.2087
GRD2016-00009	12 W Wyatt Ave	1/4/2016	0.1017
GRD2016-00010	1502 Stonewall Rd	1/22/2016	0.2430
GRD2016-00012	151 Hilton St	3/14/2016	0.1153
GRD2016-00014	700 Ramsey St	3/16/2016	0.1019
GRD2016-00015	4875 Maury Lane	3/15/2016	0.8297
GRD2016-00021	608 S Fairfax St	3/24/2016	0.0462
DSP2013-00002	700 N Washington St	3/9/2016	0.6383
DSP2013-00007	1199 S Washington St	3/30/2016	5.9200
DSP2014-00046	4580 Duke St	2/19/2016	1.5800
DSP2015-00005	3601 Jefferson Davis Hwy	2/10/2016	0.7700
GRD2015-00038	401 Courthouse Square	4/12/2016	0.0890
GRD2016-00002	3725 Taft Ave	4/29/2016	0.2093
GRD2016-00013	2600 Mt Vernon Ave	4/18/2016	0.5852
GRD2016-00016	29 W Glendale Ave	4/8/2016	0.1504
GRD2016-00018	208 N Quaker Ln	4/1/2016	0.2725
GRD2016-00019	1905 Commonwealth Ave	4/25/2016	0.1956
GRD2016-00020	10 Rosecrest Ave	5/4/2016	0.1665
GRD2016-00022	806 Beverley Drive	5/25/2016	0.0850
GRD2016-00023	1502 Ruffner Rd	5/9/2016	0.2808
GRD2016-00024	15 Forrest St	5/4/2016	0.1748
GRD2016-00025	109 N Early St	5/23/2016	0.0166
GRD2016-00030	1500 Eisenhower Ave	6/23/2016	0.1200
DSP2012-00015	2811 King St	4/29/2016	1.3058
DSP2013-00023	515 N Washington St	5/11/2016	0.8500
DSP2014-00002	5651 Rayburn Ave	6/24/2016	0.2840
DSP2014-00041	1801 Russell Rd	6/10/2016	0.3700
DSP2015-00002	3640 Wheeler Ave	5/23/2016	2.0900

14 Information on Stormwater Management Facilities

A summary of new permanent stormwater management facilities brought online during PY3 can be found in Appendix G. A total of 12 facilities were brought online this permit cycle. Historical BMPs reported for compliance with the Chesapeake Bay TMDL Action Plan for 5% Compliance are included in the Bay Action Plan submitted with the PY3 Annual Report under separate cover. Historical BMP reporting contains information on previously installed stormwater management facilities in the City of Alexandria per DEQ's "Urban BMP Reporting" spreadsheet. The City's stormwater management facility BMP database includes information for each facility as required by the permit. The electronic version of the spreadsheet with the PY3 installed BMPs is submitted with this Annual Report.

15 New or Terminated Signed Agreements

There are no new or terminated signed agreements between the City of Alexandria and any third parties for the purpose of implementing minimum control measures.

16 Written Public Comments

There were no public comment period requirements to be implemented in PY3.

17 Appendices

The following appendices provide documentation and support of BMPs for compliance activities related to each minimum control measure.

Appendix A – Minimum Control Measure #1

1. Chesapeake Bay eNews
2. City's Stormwater Quality Webpage about Fertilizer
3. Channel 69 and 70 Public Service Announcement Slides
4. Fertilizer Letter to HOA/Condo Associations/Lawn Care Companies
5. Landscaping and Lawn Care Companies Brochure
6. Northern Virginia Clean Water Partners 2016 Summary
7. Northern Virginia Regional Commission 2015 Only Rain Survey (Clean Water Partners)
8. Pet Waste eNews
9. Pet Waste Facebook Posts
10. Link to the Only Rain Website on the City's Website
11. Pet Owner Educational Brochure
12. Animal Welfare League of Alexandria Website with pet waste message
13. Only Rain and Clean the Bay Day eNews
14. Street Cleaning and Stream Cleanup Facebook Posts
15. City's Stormwater Management Website
16. Letter to Restaurants about cooking oil and grease
17. Restaurants and Food Handling Businesses Brochure
18. Letter to Auto Shops about motor oil and other automotive fluids
19. Automotive Garage and Service Centers Brochure
20. Excerpts from Eco-City Alexandria Presentation
21. City's Website with information about Storm drain marking
22. Sign for Stormwater Management Facilities
23. BMP Sign Requirement on Plan Set
24. Plan set with the requirement to place City Storm drain markers within 50 feet of the property line
25. City's Volunteer Website Page
26. City's Website with information about PCBs
27. PCB Educational Brochure for High Risk Property Owners
28. PCB Notification on Plan Set

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Eco-City Alexandria: Get Involved!

Tips to Save Money and Protect the Chesapeake Bay

Yard Maintenance Can Impact Water Quality

Proper lawn and garden care is an essential part of protecting our local water quality and the health of the Potomac River and Chesapeake Bay. Fertilizer contains nutrients that may contribute to algal blooms that kill fish and reduce the productive habitat in the Chesapeake Bay and local tributaries. Plants can only use a certain percentage of applied fertilizer. Excess fertilizer and fertilizer spread on hard surfaces may pollute water resources. Not only that, it's like throwing money away!

The point is, all these nutrients end up in our local streams and the Chesapeake Bay and may contribute to algal blooms that harm aquatic life by depleting oxygen and creating dead zones. This can mean no crabs, fish or oysters, and equals no fun!

Here's what we can all do to keep your wallet and the crabs happy:

- Test soil before fertilizing with a kit from the Virginia Cooperative Extension - know how much and what kind is needed (if any)
- Don't fertilize if rain is forecasted – it's like throwing money away
- Use fertilizers with low or no phosphorus – most lawns don't need it
- Read and follow instructions on the label – biggest bang for the buck
- Avoid spreading fertilizer on concrete or paved areas, like sidewalks and driveways, and sweep excess onto grass

Visit the [Stormwater Management Division](#) page for more ideas on how you can help protect our local streams and the Chesapeake Bay.

To change your subscription choices, [click here to login](#). To request removal of your account,

You are subscribed to the City of Alexandria's free eNews service. Replies to this message will not be received. For correspondence, please use the contact information in the body of the message.

Eco-City Alexandria: Get Involved!

Build Your Own Rain Barrel Workshop – Saturday, May 7

<https://apps.alexandriava.gov/Calendar/Detail.aspx?si=12447>

Saturday, May 7 from 9 a.m. – 11 a.m.

Operations Center (2900 Business Center Drive, Alexandria, VA 22314)

Interested in living green and protecting the Chesapeake Bay? Rain barrels collect rain water and reduce erosion from your downspout and help you save money on your water bill! You can attach a hose to your rain barrel and use it to water your plants and flower beds. The City of Alexandria's Department of Transportation and Environmental Services (T&ES), [Stormwater Management Division](#), in partnership with other regional governments and organizations working as the [Northern Virginia Rain Barrel Program](#) partners, invites residents to learn about water quality issues and build a rain barrel to take home after the workshop.

Classes fill up fast and registration is required, register [online](#) prior to the workshop.

To change your subscription choices, [click here to login](#). To request removal of your account, email enews@alexandriava.gov.



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What can we help you find?



fertilizer

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Stormwater Quality

Stormwater impacts both water quantity and water quality. The amount of stormwater runoff increases as hard surfaces increase. Large amounts of runoff can cause erosion and flooding problems. Stormwater with pollutants negatively impact the health of our local waterways, and animals like fish, turtles, frogs, and plants cannot survive in the unhealthy water.

Page updated on Aug 31, 2016 at 11:39 AM

ON THIS PAGE

- [Where Does Pollution Come From?](#)
- [Water Quality](#)
- [Stormwater BMPs](#)
- [Top 10 Things You Can Do to Protect Local Streams and Rivers](#)

RELATED CONTENT

- [Stormwater Management](#)
- [Chesapeake Bay](#)
- [Combined Sewer System](#)
- [Rain Barrels and Water Harvesting](#)

Where Does Pollution Come From?

Almost every street, lawn, driveway, rooftop, and parking lot is connected to a storm drain. When it rains, stormwater flows over these surfaces and mixes with pollutants such as spilled motor oil, pet waste, **fertilizer**, pesticides, paint, grease, and litter. This polluted stormwater runoff then flows directly to our local waterways, which eventually flow to the Potomac River and the Chesapeake Bay.

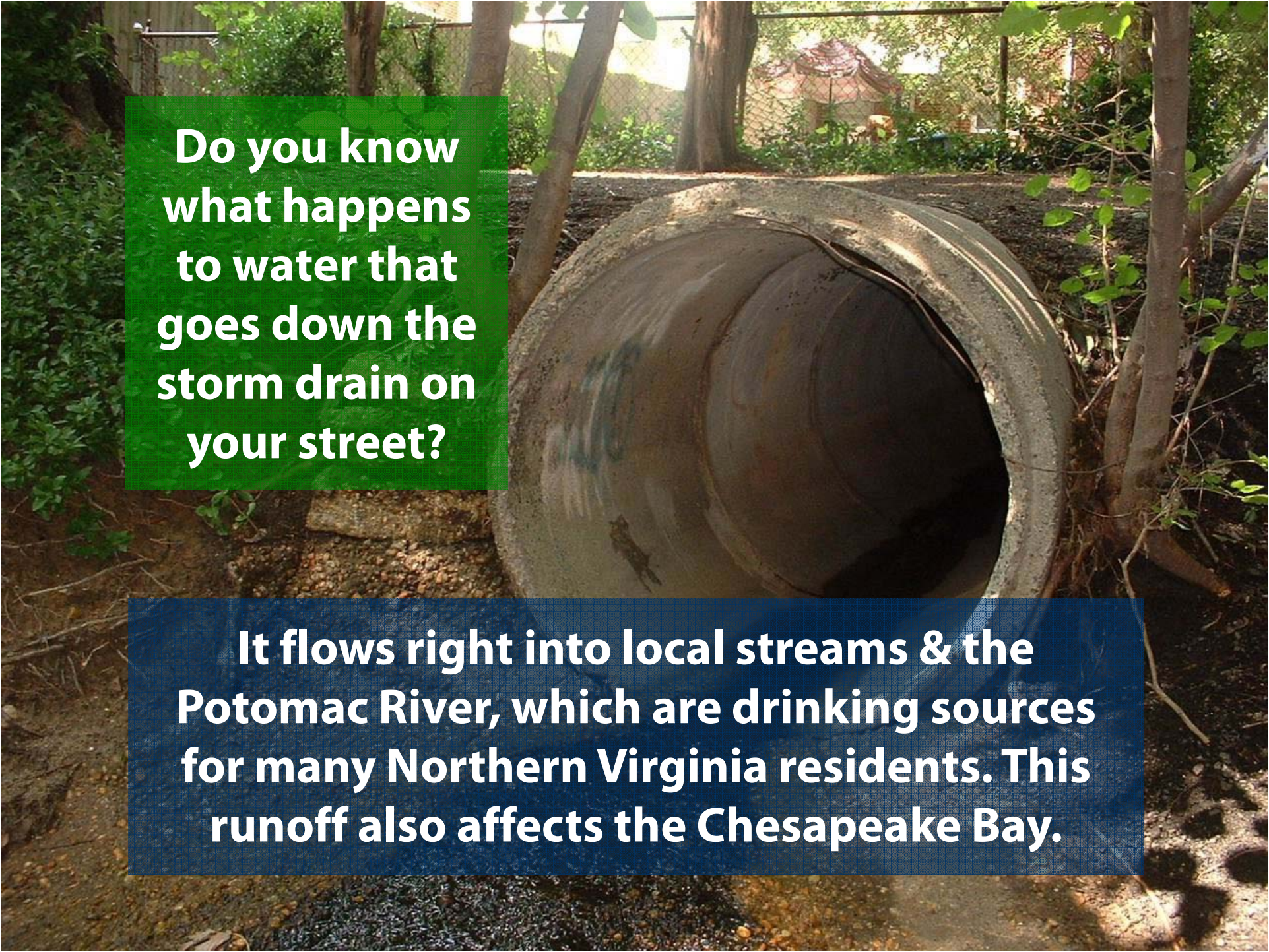
Water Quality

When it rains, stormwater flows over hard surfaces and mixes with pollutants such as spilled motor oil, pet waste, **fertilizer**, pesticides, paint, grease, and litter. This stormwater then runs directly to our local waterways and is not treated. Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people. The City has been proactive in its efforts to control stormwater pollution by implementing structural Best Management Practices (BMPs) to treat stormwater and providing public education and outreach about pollution prevention.

Visit the [Chesapeake Bay page](#) to learn more about what the City is doing to help protect the Chesapeake Bay.

Stormwater BMPs

Stormwater Quality Best Management Practices (BMPs) are facilities that treat water quality both at the surface and



**Do you know
what happens
to water that
goes down the
storm drain on
your street?**

**It flows right into local streams & the
Potomac River, which are drinking sources
for many Northern Virginia residents. This
runoff also affects the Chesapeake Bay.**



**Polluted
rainwater is
the nation's #1
water quality
problem!**

**Storm water runoff pollution means
rainwater that runs off surfaces like parking
lots, lawns, driveways, & roads picks up
contaminants such as motor oil, fertilizer,
pesticides, & bacteria from pet waste.**

Help Prevent Water Pollution



- Properly dispose of used motor oil & hazardous household waste
- Avoid excess fertilizer or pesticide use
- Wash your car at a commercial car wash
- Sweep up dirt, grass clippings & yard waste
- Always pick up pet waste!

For more information, call 703.746.4065
or visit alexandriava.gov/Environment



City of Alexandria

Department of Transportation and Environmental Services
Stormwater Management Division
2900-B Business Center Dr.
Alexandria, VA 22314
www.alexandriava.gov

April 15, 2016

RESIDENT
100 Fort Worth Place
Alexandria, VA 22304

Dear Sir or Madam,

Spring is upon us and as part of the City of Alexandria's ongoing efforts to protect water resources, this letter is being sent to remind businesses and residents that storm drain inlets connect to the Chesapeake Bay Watershed by way of local streams.

We know it is the time of the year for landscaping, but please remember fertilizers and pesticides contain chemicals that are harmful to the environment, wildlife and humans; and yard wastes can impact dissolved oxygen and nutrient levels in waterways. That is why proper handling and disposal of these items is so important. To assist the City in its continuing effort to provide a safer and cleaner environment in which to live and work, please take a few moments to read the enclosed brochure that provides ways that your operations can minimize discharge of fertilizer, pesticides or yard debris into the storm drain system.

Contact the Stormwater Management Division at 703.746.4014. or visit www.alexandriava.gov/environment if you have any questions or would like additional information about the City's Stormwater Management Program or ordinances.

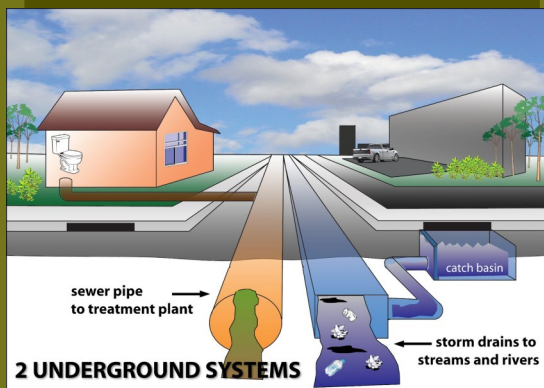


We appreciate your cooperation and help protecting our streams, the Potomac River and the Chesapeake Bay. Your cooperation and responsible actions are greatly appreciated and will help to protect our streams, the Potomac River, and the Chesapeake Bay.

Best Regards,

A handwritten signature in black ink that reads "Wisdom Gbediame".

Wisdom Gbediame,
Water Quality Compliance Specialist
Department of Transportation & Environmental Services
Stormwater Management Division



STORM SEWERS VS. SANITARY SEWERS

Sanitary sewers collect wastewater from indoor plumbing such as toilets, sinks, washing machines, and floor drains and transport it to a sewage treatment plant. The treatment plant removes pollutants from the wastewater before it is discharged into our local waterways.

Storm sewers consist of the drains and pipes found in streets and parking lots. They are intended to collect and transport runoff from rainfall. Storm drain systems do not remove pollutants from water before it is discharged into local water bodies. This means that everything that enters the drainage system also goes directly into our local streams, the Potomac River, and the Chesapeake Bay!

Illegal Dumping

Improper disposal or dumping of anything in a storm drain other than stormwater is illegal. City Code (Title 11, Ch. 13, Sec. 11-13-2) states that: It shall be unlawful for any person to dump any waste on any property, in any waters or in any sanitary sewer or stormwater system, except as authorized by law or by applicable permit.

To report illegal dumping or for questions about the stormwater program contact:



The City of Alexandria
 Department of Transportation & Environmental
 Services
 Stormwater and Sanitary Infrastructure Division
 2900-B Business Center Drive
 Alexandria, VA 22314
 Phone: 703-746-4014
www.alexandriava.gov/environment
 24-Hour Nuisance Abatement Hotline:
 703-836-0041

Publication date 6/18/2014

CITY OF ALEXANDRIA, VA

Best Management Practices for Stormwater Pollution Prevention



LANDSCAPING AND LAWN CARE COMPANIES

BEST MANAGEMENT PRACTICES

Best management practices (BMPs) are practices and procedures that are used to prevent stormwater pollution and improve water quality.

Pollution Prevention BMPs

- Never dump yard waste in streams or down the storm drain.
- Blow or sweep grass clippings back into yards and off of streets, sidewalks, and driveways. Grass clippings pollute our streams and can also be a safety issue when blown into streets.
- Grass clippings and other yard waste should be left on the yard, composted, bagged, or placed in reusable containers for collection to prevent them from entering the storm drain. Do not pile yard waste on top of storm drains.
- Re-plant bare areas to prevent soil erosion.
- Use native plants for landscaping. Native plants are adapted to local conditions and require less maintenance.

THE PROBLEM WITH POLLUTED RUNOFF

Everything washed or dumped into the storm drain flows untreated into our local streams, the Potomac River, and eventually the Chesapeake Bay.



Polluted water can kill fish and aquatic life, harm wildlife populations, kill vegetation, pollute drinking water supplies, and make recreational areas hazardous and unpleasant.

Fertilizer and Pesticide Application

- Apply the right amount of fertilizer by performing a soil test through the VA Cooperative Extension. Sample boxes can be picked up at the local Cooperative Extension office.
- Only apply fertilizer once if needed, and apply in the fall.
- Do not apply fertilizers or pesticides near a stream, river, or other water body.
- Avoid applying fertilizers and pesticides immediately before it rains.
- Always sweep up excess fertilizer that spills over onto sidewalks, driveways, or streets.





Northern Virginia Clean Water Partners

2016 Summary

WORKING TOGETHER FOR HEALTHY STREAMS AND RIVERS

Polluted stormwater runoff is the number one cause of poor water quality in streams and rivers in Northern Virginia. When it rains and water runs off city streets, suburban yards and parking lots, it picks up pesticides, grass clippings, fertilizer from lawns, bacteria from pet waste, as well as petroleum and oil from driveways and parking lots. Don't forget about the sediment from construction sites or the litter and cigarette butts from the sidewalk. All of this pollution enters the storm drains on the street and is discharged directly to a stream. It is not filtered or sent to a sanitary sewage facility.

To reduce the impacts of stormwater pollution, the Northern Virginia Clean Water Partners aims to change human behaviors in our cities and neighborhoods through a public awareness and education campaign.






The Northern Virginia Clean Water Partners is comprised of a multi-disciplined group of local governments, drinking water and sanitation authorities, and individual businesses working together to inform individuals and households about the pollution potential of common activities, such as washing cars, applying lawn chemicals, changing motor oil, and disposing of leftover paint and household chemicals so

that individuals can take direct action to reduce pollution.

"Only Rain Down the Storm Drain" is the motto of the partnership.

The primary goal of the partnership is to reduce stormwater-related pollution from entering local waterways.

To meet this goal, the Partners work together to:

-  Identify high priority water quality issues for the region;
-  Identify the target audience(s) for outreach;
-  Educate the region's residents on simple ways to reduce pollution around their homes;
-  Monitor changes in behavior through surveys and other data collection techniques; and
-  Pilot new cost-effective opportunities for public outreach and education.

Members include stormwater program managers, Municipal Separate Storm Sewer System (MS4) Permit managers, communication directors, public information officers, water quality compliance specialists, and environmental planners.

Membership is voluntary and each member pays annual dues to fund the program. The partnership provides a cost-effective means to meet mandatory state and federal stormwater requirements. By working together the partners are able to leverage their available funds to develop and place bilingual educational products with common messages and themes, thereby extending their individual reach.

Regional Stormwater Education Campaign

The Annual Regional Stormwater Education Campaign was initiated in 2003 to assist localities in leveraging funds to achieve common goals regarding stormwater education and outreach and promote consistent messages for high priority water quality issues.

The 2016 campaign satisfied MS4 (Municipal Separate Storm Sewer System) Phase I and Phase II permit requirements for stormwater education and documenting changes in behavior.

For more information visit www.onlyrain.org



About the Partnership

The Northern Virginia Clean Water Partners is open to any water and sewer district, government agency, or school system in and around Northern Virginia.



2016 Northern Virginia Clean Water Partners

Fairfax County | Arlington County | Loudoun County | Stafford County | Fairfax Water | City of Alexandria | Loudoun Water | City of Fairfax | Town of Herndon | City of Falls Church | Town of Leesburg | Town of Vienna | Town of Dumfries | Doody Calls | Northern Virginia Regional Commission | Virginia Coastal Zone Management Program | George Mason University | Fairfax County Public Schools | Northern Virginia Community College | Prince William County Public Schools | Northern Virginia Soil and Water Conservation District




2016 Campaign Overview

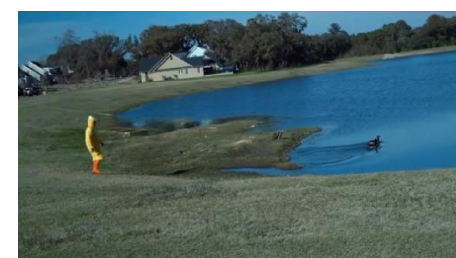
In 2016, the Northern Virginia Clean Water Partners selected the following three high priority water quality issues; 1) bacteria, 2) nutrients, and 3) illicit discharge of chemical contaminants to focus on for the Campaign. The Partners identified the target audiences for these issues as 1) pet owners, 2) homeowners with a lawn or garden, and 3) home mechanics.

The Campaign used television, print, internet advertising and the Only Rain Down the Storm Drain website to distribute messages linked to specific stormwater problems, such as proper pet waste disposal, over fertilization of lawns and gardens and proper disposal of motor oil. In addition to the multi-channel media campaign, educational events hosted throughout the Northern Virginia region also raised awareness and encouraged positive behavior change in residents. The television and internet ads featured the well known national symbol of non-point source pollution; the rubber ducky.



Throughout the campaign year, the Partners made the following efforts to educate the public and promote awareness of stormwater pollution:

 From July 2015 through June 2016, four Public Service Announcements featuring messages on the importance of picking up pet waste and general household stormwater pollution reduction measures aired on 32 English language cable TV channels, and four Spanish speaking channels a total of 41,434 times.





2016 Accomplishments

16,750,236 Total household television impressions*

1,381,317 Total digital impressions including internet banner ads and in-stream video ads

41,434 Number of times the ads aired on television from July 2015 – June 2016

37,489 Visits to the www.onlyrain.org website

500 Online Annual Survey Responses

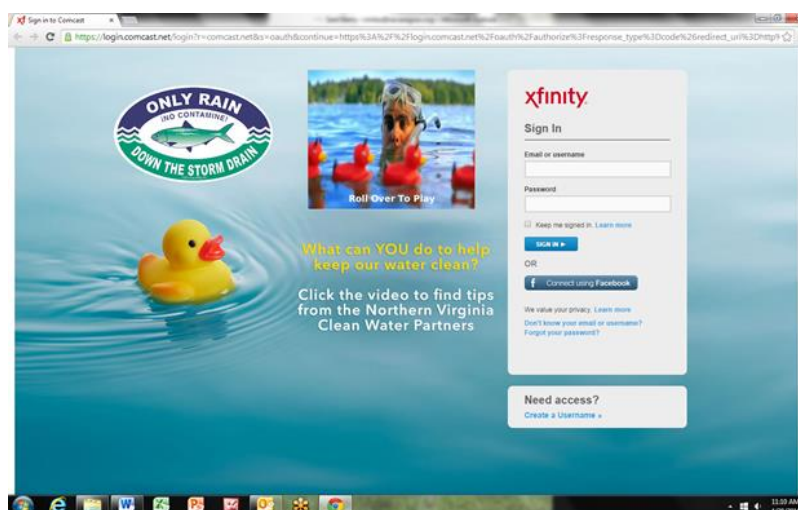
75% Percent of target audience reached

* Impressions are the number of times an ad appeared on a single television or computer screen.

- 🦆 The campaign also featured banner ads on Xfinity.com and Cox.com websites that promote the same messages as the cable TV ads.
- 🦆 Featured two full day, full page ads on the sign-in pages for Xfinity.com
- 🦆 Conducted an online survey of 500 Northern Virginia residents to determine the effectiveness of the ads, aid in directing the future efforts of the campaign, and to reveal any changes in behavior.



- 🦆 Attended various community events to promote awareness of proper disposal of pet waste and clean water lawn care tips.
- 🦆 Continued to update and maintain the Northern Virginia Clean Water Partners website. ➤





Main cause of water pollution...

The believed #1 cause of local water pollution was fertilizers and pesticides.



Where stormwater goes...

79 percent of Northern Virginia residents surveyed stated that stormwater goes to the Potomac River, the Chesapeake Bay, or to local streams and rivers.



90%

Stated the actions of individuals are important in protecting water quality in local streams, the Potomac River, and the Chesapeake Bay is important.



70%

Would be more likely to take actions to reduce the amounts of pollutants they personally put into storm drains, after learning that polluted water runoff is the number one cause of local water pollution.



95%

Believe it is important for local governments to spend more money on protecting water quality.

Annual Survey Highlights

Findings in the 2016 survey include:

- 🦆 A video clip of one of the Clean Water Partners ads was presented in the survey and 16% of respondents recalled seeing the ad after watching the video.
- 🦆 The two channels that were most strongly associated with recall of the ad were Cartoon Network and Animal Planet. In fact, the highest numbers of impressions (2.8 million) were delivered on Cartoon Network.
- 🦆 Of those who recalled the ads, 18 percent state they now pick up their pet waste more often, eight percent state that they now properly dispose of motor oil, and 14 percent state they plan to fertilize fewer times per year.
- 🦆 13 percent of respondents believe that stormwater runoff goes to a wastewater treatment facility which indicates the importance of storm drain marking to promote awareness.
- 🦆 In a new question for 2016 to understand the barriers to taking action, 40 percent of the respondents felt they were most prevented from taking action to protect clean water because they didn't know what to do.
- 🦆 In another new question added in 2016, approximately one-third (34%) indicated that email newsletters with reminders and quick tips and/or online resources would help them take action to protect clean water.
- 🦆 When shown the Only Rain Down the Storm Drain logo, 61 percent of the respondents recognized it compared to 54 percent in 2013. This increase is statistically significant and indicates that awareness of the logo has increased over time.
- 🦆 Interestingly, the number of respondents who prefer to receive information from online sources has decreased from a high of 57 percent in 2012 to 40 percent in 2016. Television (19%), newspaper and community newsletters were equally preferred information sources. This suggests that a future outreach effort might include reaching homeowners through their Community Associations.

Understanding Behaviors

In addition to capturing responses to questions regarding the effectiveness of the campaign, this year's survey honed in on the current behaviors and attitudes of Northern Virginia residents as they relate to pet waste management, lawn care, and motor oil disposal. Responses to these questions support the development of future messages and targeted promotion.

The most important reason dog owners are motivated to pick up their pet's waste is because "It's what good neighbors do". The number of respondents choosing "It causes water pollution" as the most important reason to pick it up has fluctuated but remains the third most common reason.

Consistent with the past five years, almost a third of lawn and garden owners fertilize their lawns two or more times per year; an equal number never fertilize their lawns. Among those who fertilize once a year, 18 percent fertilize in the spring and only seven percent fertilize in the fall. This suggests that there is room to educate more residents of Northern Virginia that fertilizing in the fall is better for local waterways than fertilizing in the spring.

About half of the respondents reported using an herbicide to treat weeds in their lawn or garden.

Among those who fertilize their lawn, 70 percent have never had or were not sure if their soil had been tested for fertility or pH and fifty nine percent reported using a slow release fertilizer.

Consistent with the past five years, the majority of respondents take their vehicle to a service station for oil changes (79%) or take used oil to a gas station or hazmat facility for recycling (13%). Three percent of Northern Virginians reported storing used motor oil in their garage, placing it in the trash or dumping it down the storm drain.

Only Rain
Down the
Drain
www.onlyrain.org

20161 Northern Virginia Clean Water Partners

Fairfax County | Arlington County | Loudoun County | Stafford County | Fairfax Water |
City of Alexandria | Loudoun Water | City of Fairfax |
Town of Herndon | City of Falls Church | Town of Leesburg | Town of Vienna |
Town of Dumfries | Doody Calls | Northern Virginia Regional Commission | George Mason
University | Virginia Coastal Zone Management Program | Northern Virginia Community College |
Fairfax County Public Schools | Prince William County Public Schools | Northern Virginia Soil and
Water Conservation District



Summary prepared by NVRC on behalf of the Partners

For more information contact:
Corey Miles
Senior Environmental Planner
703-642-4625
3040 Williams Drive, Suite 200
Fairfax, VA 22031
cmiles@novaregion.org



Northern Virginia Regional Commission 2016 Only Rain NVRC Survey

Summary Report of Findings

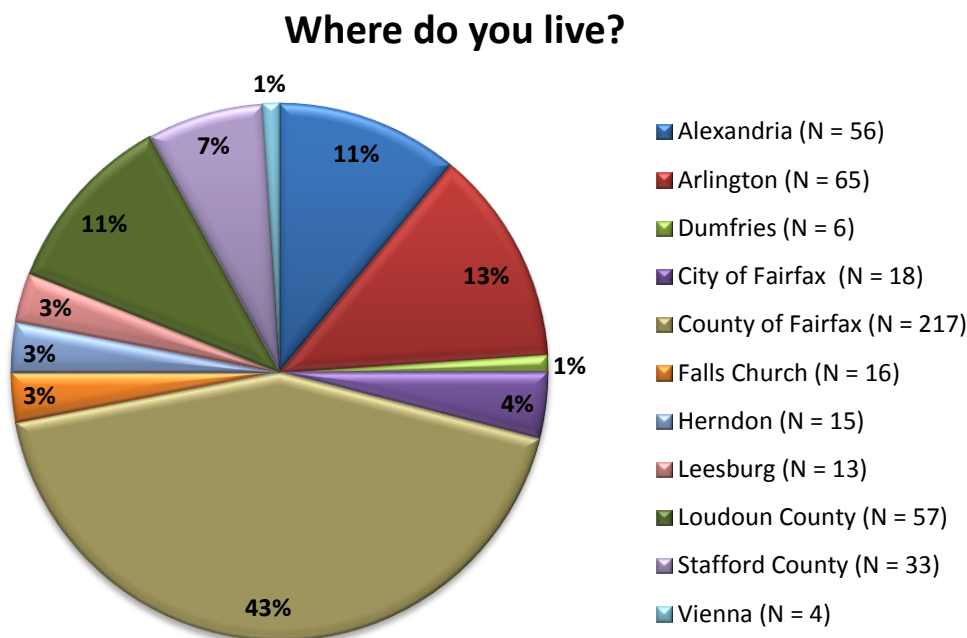
6/15/2016

Amplitude Research, Inc.

Study Methodology & Respondent Characteristics

The Northern Virginia Regional Commission (NVRC) hired Amplitude Research, Inc. to conduct a survey of residents of northern Virginia to measure beliefs and attitudes related to pollution of the Potomac River and Chesapeake Bay.

Amplitude Research administered the study online beginning on May 18, 2016. In the end, 500 surveys were completed by web panelists who live in one of the areas of Virginia shown in the chart below. (In the legend, “N =” indicates the number of respondents in each city, county, or town.)



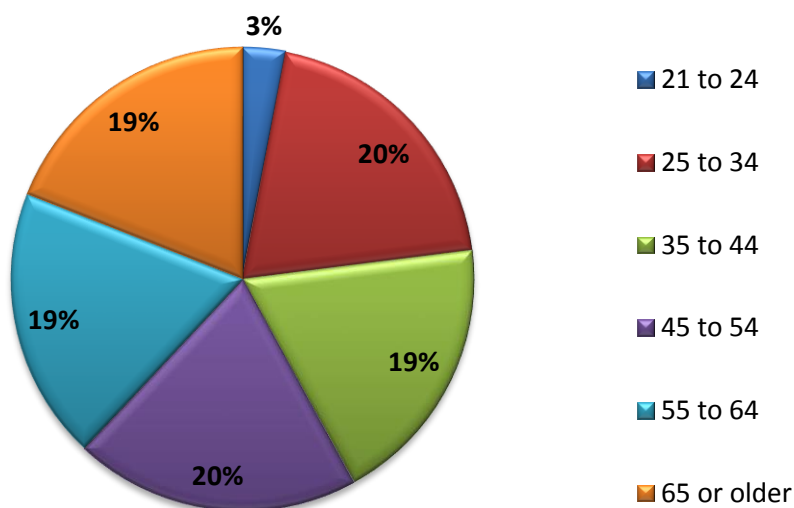
Later in this report, the results for some of the questions are “broken out” by area, in addition to presenting the results for the total sample. However, the specific areas listed above were grouped together into larger areas so that each larger area used for analysis had a reasonable number of respondents.

Residents from Leesburg and Loudoun County were combined into a single category labeled “**Leesburg / Loudoun**,” since the town of Leesburg lies within Loudoun County. Another category used for analysis was “**Dumfries / Stafford**,” since Dumfries lies just north of Stafford County. Although Dumfries is not located within Stafford County, it is closer to Stafford than to the other counties covered in the survey. (There were too few survey respondents living in Dumfries to examine the results for Dumfries separately.) The City of Fairfax, Falls Church, Herndon, and Vienna were combined with Fairfax County to create the category “**Fairfax Inclusive**,” since these cities and towns lie within the Fairfax County area. Although the City of Fairfax and City of Falls Church are distinct areas, their location falls within the larger area circumscribed by Fairfax County.

Alexandria and Arlington each had more than 50 respondents and therefore each of these areas can be examined separately.

The minimum age to participate in the survey was 21. As shown in the chart below, each age group was well represented in the survey. Although a small proportion were age 21 to 24, this category has fewer years than the other categories shown. For analysis purposes later in this report, the categories “21 to 24” and “25 to 34” were combined into the broader category of “21 to 34.”

Which category includes your age?



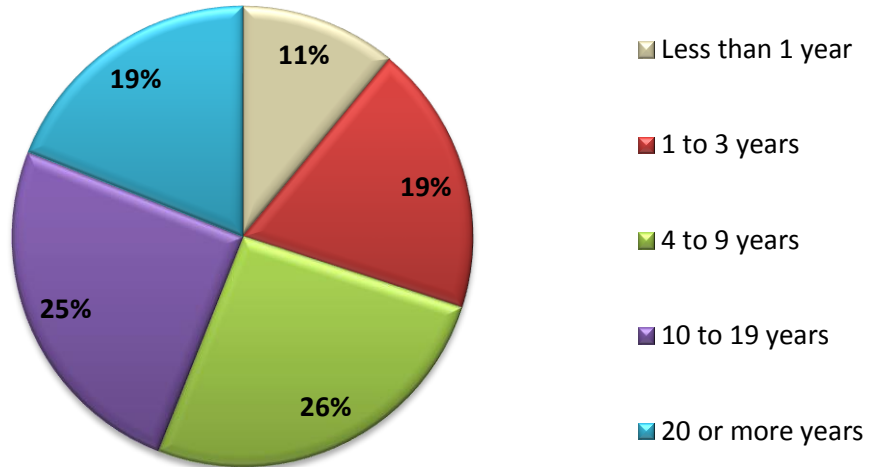
The survey respondents were split between males (48%) and females (52%), while approximately three-fourths (76%) indicated that they own their residence, and 24% reported renting.

The first chart on the next page shows how long respondents have lived in their current residence, and the second chart shows how long they have lived in northern Virginia. On the page after that, results are shown for the type of residence.

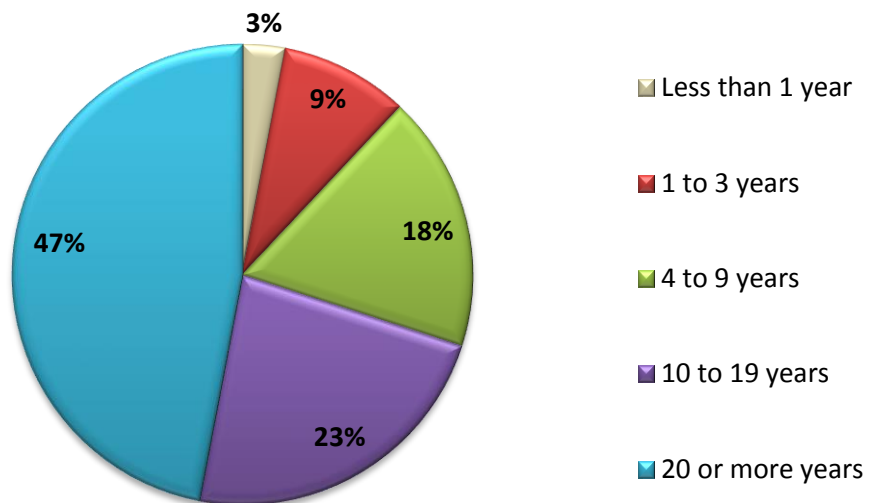
A survey was conducted in each year between 2011 and 2015 that included many of the same or similar questions, targeted the same geographic area, and had a similar demographic mix as in this 2016 study. Later in this report, comparisons between years are shown where appropriate. Initially, the title used for the study was “NVRC Resident Survey.” Starting in 2013, the study title was changed to “Only Rain NVRC Survey,” since a new question was added about awareness of the “Only Rain” logo.

In 2016, a minimum quota of 8% of the total sample was set for those who are of Hispanic heritage to ensure sufficient representation and to allow analysis of results specifically among Hispanic respondents.

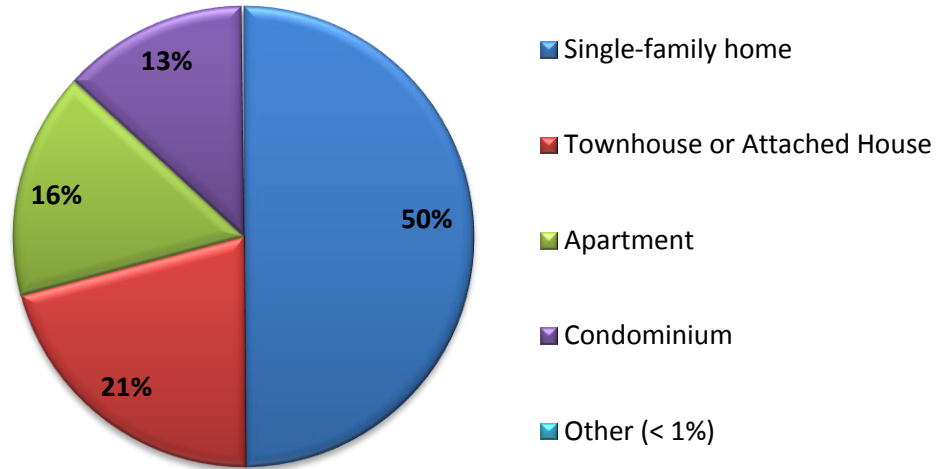
For how many years have you lived in your current residence?



For how many years have you lived in Northern Virginia?



Which of the following best classifies your current residence?



Sampling Variability

While examining the survey findings, it is helpful to keep in mind that the results are based on a sample and are therefore subject to sampling variability, often referred to as “sampling error.” The degree of uncertainty for an estimate (e.g., a particular percentage from the survey) arising from sampling variability is represented through the use of a margin of error. A sampling margin of error at the “95% confidence level” can be interpreted as providing a 95% probability that the interval created by the estimate plus and minus the margin of error contains the true value. (The “true” value would be known only if everyone in the target market was surveyed rather than just a sample.) In addition to sampling variability, results may be subject to various sources of non-sampling error (e.g., non-response bias, respondent misinterpretation of question wording, etc.). The degree of non-sampling error is not represented by the sampling margin of error and is usually unknown.

For a “sample size” of 500 survey respondents, the “maximum” margin of sampling error for percentages from the survey is ± 4.4 percentage points at the 95% confidence level. Here, “maximum” refers to the margin of error being highest for proportions from the survey near 50%, while the margin of error declines as percentages get further from 50%. For example, given the same sample size of 500 respondents, a result from the survey near 10% or 90% would have a margin of sampling error of ± 2.6 percentage points.

The margin of sampling error increases as the sample size decreases. Thus, when a question is asked of only a subset of the total sample, the associated margin of sampling error is larger than that quoted above. Also, even if a question is asked of all respondents, when examining results for a particular subgroup, the margin of sampling error depends on the number of respondents in that subgroup. For example, the “maximum” margin of sampling error would be ± 9.8 percentage points at the “95% confidence level” when based on a subgroup of 100 survey respondents. In some parts of this report, results are shown for subgroups that include a fairly small number of respondents, and caution is recommended when thinking about these findings.

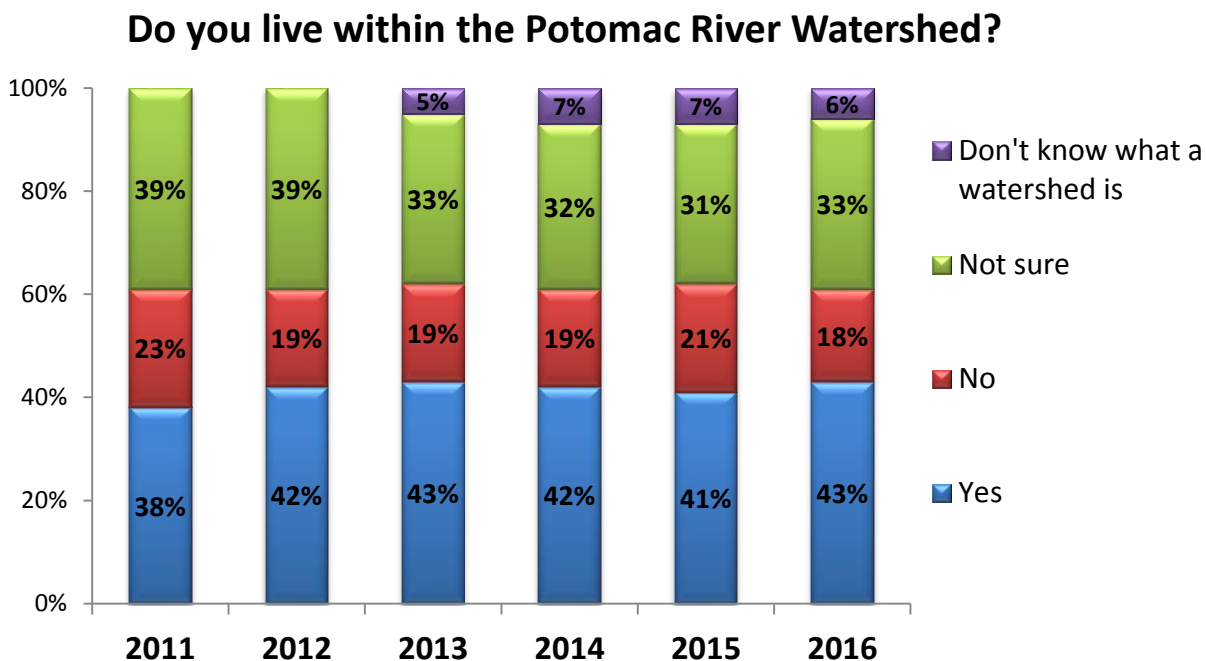
This suggests that results for different subgroups can be considered “similar” when the differences are small (i.e., small enough to be within the range of sampling error).

Results from different years can be considered similar when differences between the years are small. If the difference between two years is referred to as “statistically significant,” this essentially means that the difference in the survey results is large enough to be highly confident (i.e., at the “95% confidence level”) that there has been a real change. That is, a “statistically significant” difference in the survey results from one year to the next is larger than what would usually be expected from sampling error alone.

In this report, when a result from 2016 is described as “significantly” higher (or lower) than the result from a previous year, this means that the difference between these years is “statistically significant.” Also, when one subgroup is described as “more likely” (or “less likely”) than another subgroup to answer in a particular way, this is based on a statistically significant difference.

Potomac River Watershed

- Early in the survey, respondents were asked if they lived within the “Potomac River Watershed.” As shown in the chart below, slightly more than four-in-ten (43%) in 2016 believed that they did in fact live within the Potomac River Watershed. Similar proportions held this belief in previous years.



- Nearly four-in-ten each year were not sure if they lived within the Potomac River Watershed or did not know what a watershed is. (The response option “I do not know what a watershed is” was first added in the 2013 survey.)
- When breaking the results out by area, as shown in the table below, four-in-ten or more in each area believed that they live in the Potomac River Watershed.

Live Within Potomac River Watershed	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Yes	55%	46%	40%	40%	46%
No	13%	3%	21%	18%	28%
Not sure	30%	45%	32%	36%	23%
Don't know what a watershed is	2%	6%	7%	6%	3%
<i>N = number of respondents</i>	56	65	270	70	39

- As shown in the next table, those who have lived in northern Virginia for 20 or more years were more likely than others to say they live within the Potomac River Watershed.

Live Within Potomac River Watershed	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
Yes	29%	34%	37%	53%
No	8%	22%	23%	17%
Not sure	51%	32%	37%	27%
Don't know what a watershed is	12%	12%	3%	3%
<i>N = number of respondents</i>	59	92	115	234

- Those age 65 or older were more likely than others to believe that they live in the Potomac River Watershed.

Live Within Potomac River Watershed	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Yes	27%	33%	47%	49%	63%
No	21%	23%	15%	25%	6%
Not sure	42%	40%	30%	24%	27%
Don't know what a watershed is	10%	4%	8%	2%	4%
<i>N = number of respondents</i>	115	94	103	94	94

- When examining the results by other subgroups, males were more likely than females and homeowners were more likely than renters to believe that they live within the Potomac River Watershed. The proportion of Hispanic respondents holding this belief did not differ significantly from others.

Live Within Potomac River Watershed	Male	Female	Homeowners	Renters	Hispanic Respondents
Yes	54%	33%	47%	29%	38%
No	16%	20%	19%	16%	24%
Not sure	26%	39%	30%	43%	26%
Don't know what a watershed is	4%	8%	4%	12%	12%
<i>N = number of respondents</i>	240	260	379	121	50

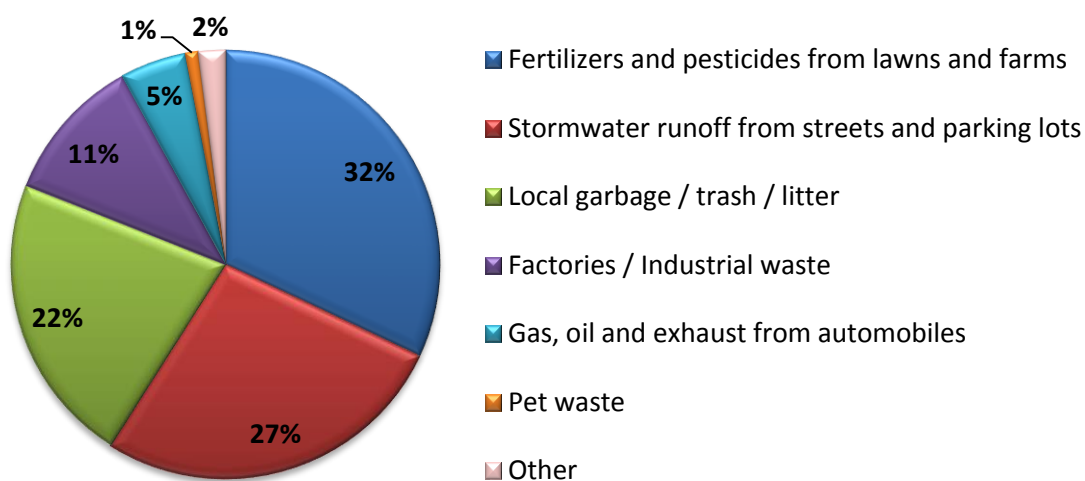
- Those living in an apartment were less likely than others to indicate that they live within the Potomac River Watershed.

<i>Live Within Potomac River Watershed</i>	Single- family Home	Townhouse	Apartment	Condo
Yes	50%	43%	26%	35%
No	18%	17%	17%	22%
Not sure	29%	35%	46%	31%
Don't know what a watershed is	3%	5%	11%	12%
<i>N = number of respondents</i>	249	104	81	65

Beliefs About Local Water Pollution

- When asked what they thought was the “Number one” cause of pollution in local streams, the Potomac River, and the Chesapeake Bay, the most frequently selected response option was “Fertilizers and pesticides from lawns and farms.” A similar question was asked in past years, but there were several wording changes to the response options in the 2016 survey. (However, “Fertilizers and pesticides from lawns and farms” was still the option selected most often in previous years.)

What do you think is the number one cause of pollution in local streams, the Potomac River, and the Chesapeake Bay?



- The second most often selected cause was “Stormwater runoff from streets and parking lots.”
- Tables on the next page (and following pages) show the results broken out by various subgroups of the total sample. For example, those who have lived in northern Virginia for 10 or more years, those age 65 or older, homeowners, males, and non-Hispanics were more likely than others to select fertilizers and pesticides from lawns and farms.

**Believed #1 Cause
of Local Water
Pollution**

	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Fertilizers and pesticides from lawns and farms	32%	29%	33%	29%	28%
Stormwater runoff from streets and parking lots	27%	32%	29%	21%	21%
Local garbage / trash / litter	14%	19%	22%	26%	28%
Factories / Industrial waste	16%	9%	10%	11%	8%
Gas, oil and exhaust from automobiles	11%	6%	3%	6%	10%
Pet waste	0%	0%	2%	0%	0%
Other	0%	5%	1%	7%	5%

N = number of respondents

56

65

270

70

39

**Believed #1 Cause
of Local Water
Pollution**

**Have Lived
in Northern
Virginia
< 4 Years**

4 to 9 Years

**10 to 19
Years**

**20 or More
Years**

Fertilizers and pesticides from lawns and farms	20%	16%	33%	40%
Stormwater runoff from streets and parking lots	25%	31%	27%	27%
Local garbage / trash / litter	19%	29%	18%	21%
Factories / Industrial waste	24%	12%	13%	5%
Gas, oil and exhaust from automobiles	7%	10%	6%	3%
Pet waste	2%	0%	0%	2%
Other	3%	2%	3%	2%

N = number of respondents

59

92

115

234

**Believed #1 Cause
of Local Water
Pollution**

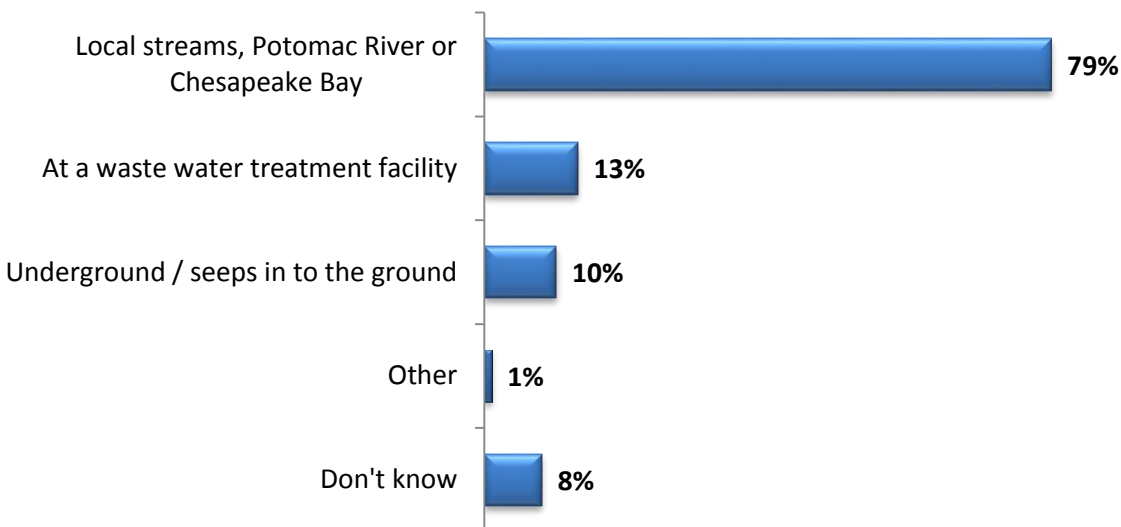
	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Fertilizers and pesticides from lawns and farms	18%	20%	36%	34%	52%
Stormwater runoff from streets and parking lots	13%	34%	36%	30%	27%
Local garbage / trash / litter	38%	24%	15%	17%	12%
Factories / Industrial waste	17%	14%	6%	12%	3%
Gas, oil and exhaust from automobiles	12%	6%	4%	3%	0%
Pet waste	2%	0%	1%	2%	0%
Other	0%	2%	2%	2%	6%
<i>N = number of respondents</i>	115	94	103	94	94

**Believed #1 Cause
of Local Water
Pollution**

	Male	Female	Homeowners	Renters	Hispanic Respondents
Fertilizers and pesticides from lawns and farms	37%	27%	35%	22%	16%
Stormwater runoff from streets and parking lots	32%	23%	27%	29%	12%
Local garbage / trash / litter	16%	26%	20%	27%	28%
Factories / Industrial waste	8%	13%	10%	14%	26%
Gas, oil and exhaust from automobiles	3%	8%	5%	6%	14%
Pet waste	0%	2%	1%	0%	0%
Other	4%	1%	2%	2%	4%
<i>N = number of respondents</i>	240	260	379	121	50

<i>Believed #1 Cause of Local Water Pollution</i>	Single- family Home	Townhouse	Apartment	Condo
Fertilizers and pesticides from lawns and farms	37%	28%	21%	29%
Stormwater runoff from streets and parking lots	28%	25%	29%	26%
Local garbage / trash / litter	17%	28%	29%	20%
Factories / Industrial waste	9%	12%	12%	13%
Gas, oil and exhaust from automobiles	6%	3%	7%	6%
Pet waste	1%	0%	0%	3%
Other	2%	4%	2%	3%
<i>N = number of respondents</i>	<i>249</i>	<i>104</i>	<i>81</i>	<i>65</i>

"Stormwater" runoff is rain or other water that flows into the street, along the gutter and into the storm drain. To the best of your knowledge, where do you believe storm water eventually ends up?



- “Local streams, Potomac River or Chesapeake Bay” was selected most often as where stormwater is believed to end up. In previous years, this response option was shown as two options with “Local streams” separate, so the 2016 results are not comparable to the past for this question. Results by various subgroups are shown below and on the next page. For example, males and homeowners were more likely than others to select the top response, while those under age 35, those living in the area for less than four years, and those of Hispanic heritage were less likely than others to select this response.

<i>Believed Destination of Stormwater</i>	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Local streams, Potomac River or Chesapeake Bay	86%	75%	78%	73%	90%
Underground / seeps in to the ground	16%	11%	9%	14%	8%
At a waste water treatment facility	7%	14%	13%	14%	15%
Don't know / other	4%	9%	11%	7%	3%
<i>N = number of respondents</i>	56	65	270	70	39

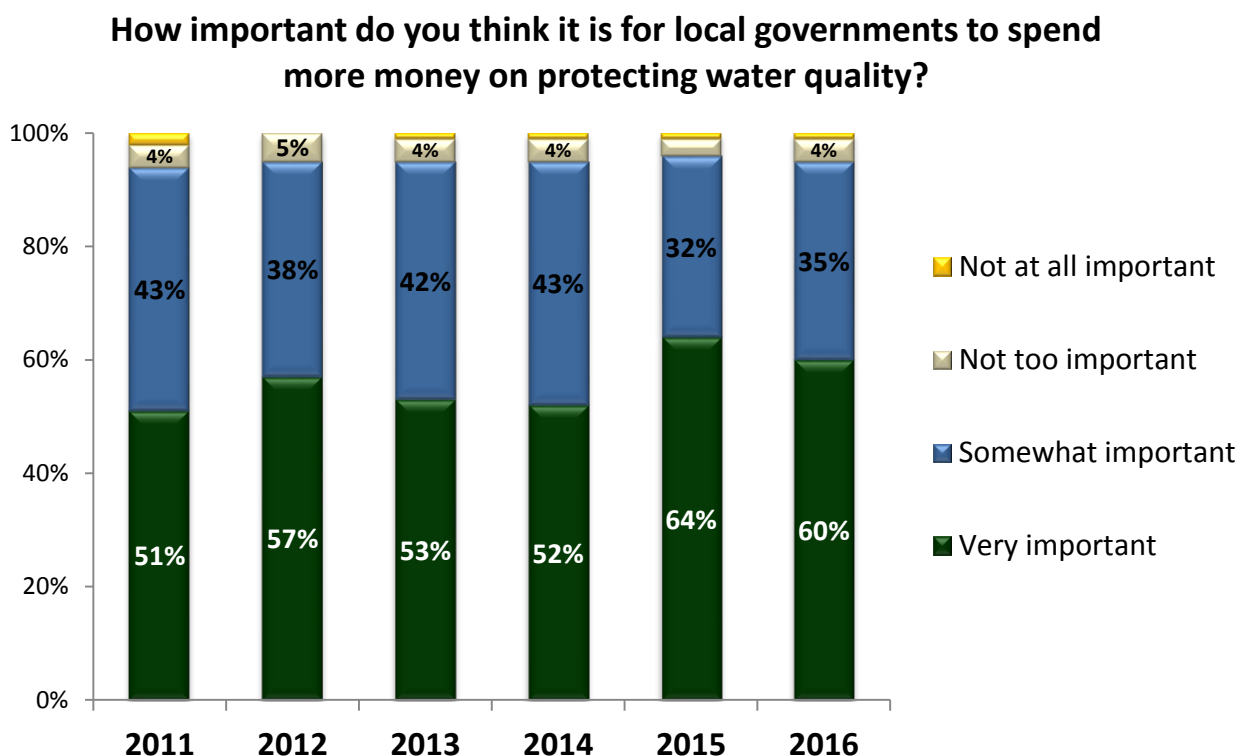
<i>Believed Destination of Stormwater</i>	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
Local streams, Potomac River or Chesapeake Bay	61%	82%	77%	82%
Underground / seeps in to the ground	12%	14%	10%	9%
At a waste water treatment facility	24%	13%	12%	11%
Don't know / other	15%	7%	10%	8%
<i>N = number of respondents</i>	59	92	115	234

<i>Believed Destination of Stormwater</i>	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Local streams, Potomac River or Chesapeake Bay	66%	82%	83%	79%	86%
Underground / seeps in to the ground	18%	10%	10%	11%	2%
At a waste water treatment facility	24%	13%	12%	7%	6%
Don't know / other	11%	9%	9%	10%	6%
<i>N = number of respondents</i>	115	94	103	94	94

<i>Believed Destination of Stormwater</i>	Male	Female	Homeowners	Renters	Hispanic
Local streams, Potomac River or Chesapeake Bay	83%	75%	82%	69%	64%
Underground / seeps in to the ground	9%	12%	9%	16%	14%
At a waste water treatment facility	11%	15%	9%	24%	32%
Don't know / other	7%	11%	7%	16%	14%
<i>N = number of respondents</i>	240	260	379	121	50

<i>Believed Destination of Stormwater</i>	Single- family Home	Townhouse	Apartment	Condo
Local streams, Potomac River or Chesapeake Bay	80%	84%	65%	83%
Underground / seeps in to the ground	9%	10%	20%	6%
At a waste water treatment facility	10%	13%	26%	8%
Don't know / other	9%	4%	17%	8%
<i>N = number of respondents</i>	249	104	81	65

- When asked the question below, the proportion rating “Very important” in 2016 did not differ significantly from 2015, but it was significantly higher than in 2011, 2013, and 2014.



- The majority from each area felt it was “Very important” for local governments to spend more money on protecting water quality.

Importance of Local Water Quality Spending	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Not at all important	0%	1%	1%	0%	2%
Not too important	4%	2%	5%	6%	3%
Somewhat important	34%	40%	35%	36%	28%
Very important	62%	57%	59%	58%	67%
<i>N = number of respondents</i>	56	65	270	70	39

- In each of the subgroups covered in the tables on the next page, a majority gave a rating of “Very important.”

Importance of Local Water Quality Spending	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
Not at all important	2%	2%	0%	1%
Not too important	5%	4%	4%	4%
Somewhat important	32%	42%	37%	32%
Very important	61%	52%	59%	63%
<i>N = number of respondents</i>	59	92	115	234

Importance of Local Water Quality Spending	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Not at all important	2%	1%	0%	2%	1%
Not too important	7%	2%	6%	1%	5%
Somewhat important	40%	43%	27%	34%	30%
Very important	51%	54%	67%	63%	64%
<i>N = number of respondents</i>	115	94	103	94	94

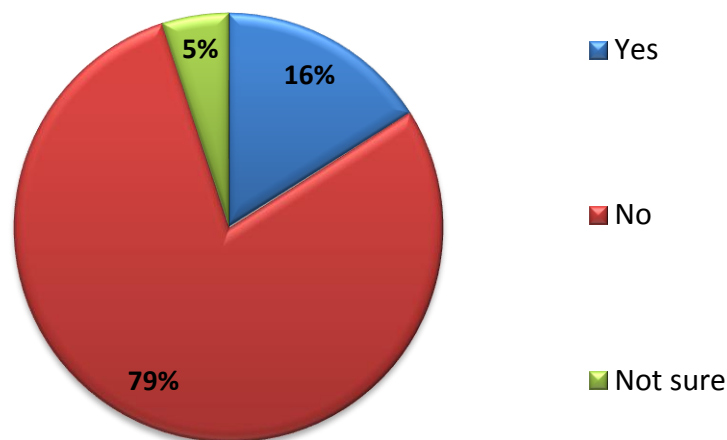
Importance of Local Water Quality Spending	Male	Female	Homeowners	Renters	Hispanic Respondents
Not at all important	2%	0%	1%	1%	2%
Not too important	6%	3%	5%	3%	6%
Somewhat important	30%	40%	36%	32%	20%
Very important	62%	57%	58%	64%	72%
<i>N = number of respondents</i>	240	260	379	121	50

Importance of Local Water Quality Spending	Single- family Home	Townhouse	Apartment	Condo
Not at all important	1%	0%	1%	1%
Not too important	6%	5%	1%	2%
Somewhat important	30%	44%	32%	43%
Very important	63%	51%	66%	54%
<i>N = number of respondents</i>	249	104	81	65

Advertising

- In 2016, a video of an advertisement featuring “rubber duckies” was presented in the survey, and respondents were asked if they had seen it on TV or the Internet. This is the first year that a video was shown. In 2015, without presenting a video, 9% indicated that they had seen ads on TV or the Internet about reducing water pollution and featuring “rubber duckies.” In 2016, as shown below, 16% recalled this ad after watching the video.

Please view the video above. Have you seen this ad, or a similar one on TV or the Internet about reducing water pollution?



- The proportion recalling the ad by area ranged from 9% to 20%. However, the differences between areas were not statistically significant. Results by other subgroups are shown on the next page. For example, those under age 35, males, renters, and those of Hispanic heritage were more likely than others to recall the ad.

Saw TV / Internet Ads on Reducing Water Pollution	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Yes	20%	9%	16%	14%	18%
No	78%	83%	79%	79%	77%
Not sure	2%	8%	5%	7%	5%
<i>N = number of respondents</i>	56	65	270	70	39

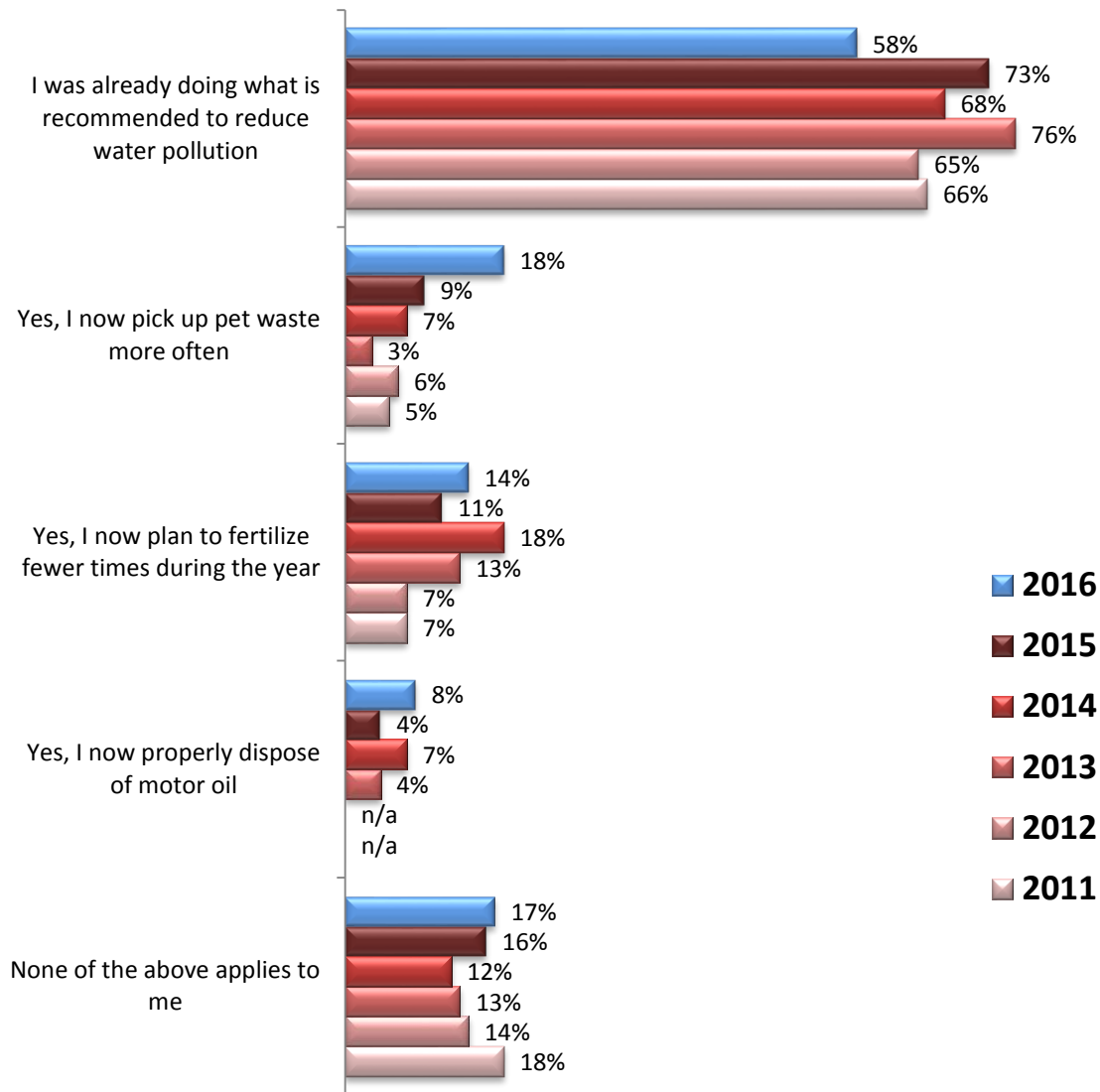
Saw TV / Internet Ads on Reducing Water Pollution	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
Yes	14%	22%	17%	13%
No	76%	72%	78%	83%
Not sure	10%	6%	5%	4%
<i>N = number of respondents</i>	59	92	115	234

Saw TV / Internet Ads on Reducing Water Pollution	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Yes	25%	12%	17%	10%	12%
No	69%	84%	74%	87%	84%
Not sure	6%	4%	9%	3%	4%
<i>N = number of respondents</i>	115	94	103	94	94

Saw TV / Internet Ads on Reducing Water Pollution	Male	Female	Homeowners	Renters	Hispanic Respondents
Yes	20%	12%	14%	21%	34%
No	75%	82%	81%	74%	60%
Not sure	5%	6%	5%	5%	6%
<i>N = number of respondents</i>	240	260	379	121	50

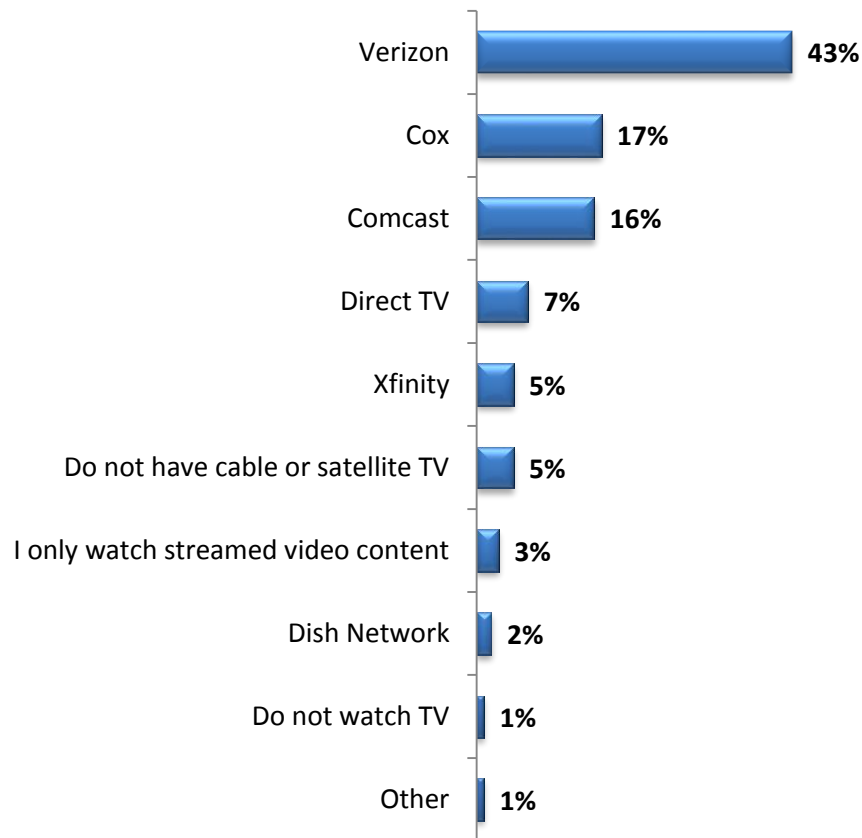
Saw TV / Internet Ads on Reducing Water Pollution	Single- family Home	Townhouse	Apartment	Condo
Yes	17%	17%	17%	6%
No	78%	78%	77%	88%
Not sure	5%	5%	6%	6%
<i>N = number of respondents</i>	249	104	81	65

Did seeing this ad make you take action on your property to prevent water pollution?



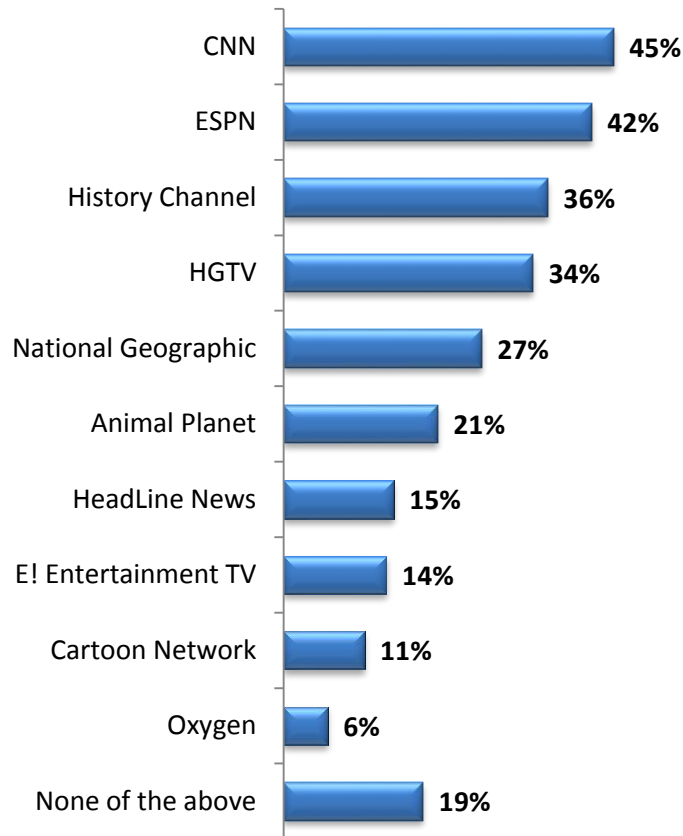
- Nearly one-in-five (18%) in 2016 of those who recalled the ad shown in the survey indicated that they now pick up pet waste more often as a result of seeing the ad. This is noticeably higher than in previous years. However, the results from past years are not perfectly comparable to the results from 2016. In previous years, a video was not shown in the survey, and there were slight wording changes in the question about the ad that may have impacted results.

What TV service provider do you use?



- Verizon was selected most often (by 43%) as their TV service provider.
- Based on a separate analysis (not shown in chart), Verizon had the highest share in four out of five of the areas: 61% in Leesburg / Loudoun, 49% in Fairfax Inclusive, 34% in Arlington, and 33% in Dumfries / Stafford. However, Comcast had the largest share (61%) in Alexandria.
- One reason for adding the question above to the 2016 survey was to determine if recall of the ad differed by TV provider. It turns out that TV recall was similar across providers. When looking at the providers with at least 30 respondents using that provider, the proportion recalling the ad was 17% among Verizon customers, 18% among Cox customers, 16% among Comcast customers, and 14% among Direct TV users.

Which channels have you watched in the past 30 days?

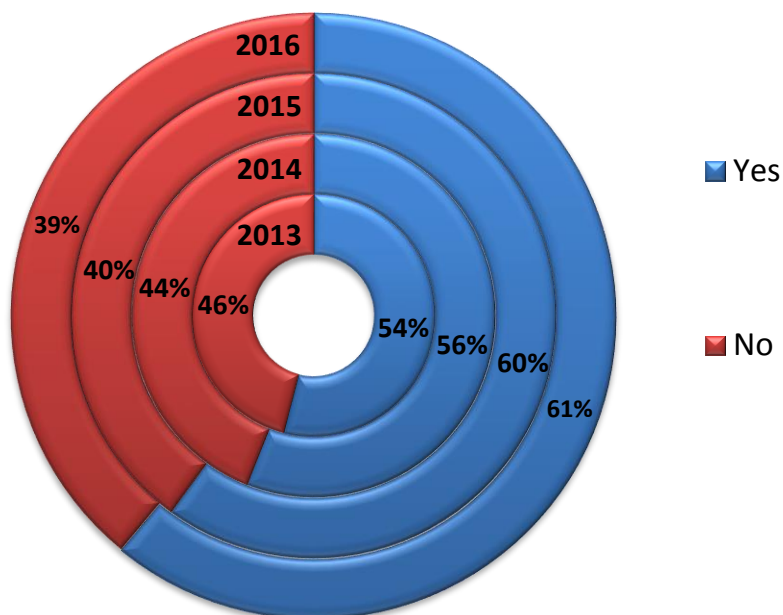


- CNN (45%) was selected most often, followed closely by ESPN (42%), as a channel watched within the past 30 days.
- One reason for adding the question above to the 2016 survey was to determine if recall of the ad differed by channels watched. The two channels that were most strongly associated with recall of the ad were Cartoon Network and Animal Planet. Among those who have watched Cartoon Network within the past 30 days, 38% recalled the ad that was shown in the survey, while 32% of those who have watched Animal Planet recalled the ad.
- For several channels, recall of the ad among those who have watched within 30 days was 20% or slightly higher: National Geographic (23% of watchers recalled the ad), CNN (21%), HeadLine News (21%), History Channel (21%), ESPN (20%).
- However, those who watched E!, HGTV, and/or Oxygen were not significantly more likely than others to recall the ad.
- Among those who watched *none* of the channels above, only 4% recalled the ad.

- The logo below was shown to all respondents in 2013, 2014, 2015, and 2016 regardless of whether they had seen advertising or not, and more than half of the total sample recognized the logo. The difference between 61% in 2016 and 54% in 2013 was statistically significant. However, the 2016 result did not differ significantly compared to 2015 and 2014.



Have you ever seen the logo above anywhere?



- Results for the question above in 2016 by subgroup are shown on the next page. Interestingly, awareness was significantly lower in Dumfries / Stafford. This was the case last year as well, and this suggests that there is room for increasing awareness in this area.

Have Seen Logo	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Yes	75%	68%	61%	61%	31%
No	25%	32%	39%	39%	69%
<i>N = number of respondents</i>	56	65	270	70	39

Have Seen Logo	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
Yes	53%	61%	63%	63%
No	47%	39%	37%	37%
<i>N = number of respondents</i>	59	92	115	234

Have Seen Logo	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Yes	62%	61%	71%	62%	50%
No	38%	39%	29%	38%	50%
<i>N = number of respondents</i>	115	94	103	94	94

Have Seen Logo	Male	Female	Homeowners	Renters	Hispanic Respondents
Yes	60%	62%	62%	60%	58%
No	40%	38%	38%	40%	42%
<i>N = number of respondents</i>	240	260	379	121	50

Have Seen Logo	Single-family Home	Townhouse	Apartment	Condo
Yes	64%	68%	54%	49%
No	36%	32%	46%	51%
<i>N = number of respondents</i>	249	104	81	65

Protecting Clean Water

- In a new question added in 2016, four-in-ten (40%) of the respondents felt they were most prevented from taking action to protect clean water because they didn't know what to do. Nearly four-in-ten (38%) felt nothing prevents them.

What most prevents you from taking action to protect clean water?



- Females, renters, and those age 35 to 44 were more likely than others to select “I don’t know what to do.” Those age 45 and older, those living in the area 20 or more years, and homeowners were more likely than others to select “Nothing / I do take action to protect clean water.”

Most Prevents Action	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
I don't know what to do	43%	46%	41%	39%	33%
Nothing	37%	41%	38%	37%	31%
I don't have the time	5%	6%	5%	4%	13%
Won't make a difference	2%	5%	6%	7%	5%
It's not important to me	4%	2%	3%	3%	5%
Too expensive	4%	0%	2%	6%	5%
Physical limitations	4%	0%	3%	3%	5%
Other	1%	0%	2%	1%	3%
<i>N = number of respondents</i>	56	65	270	70	39

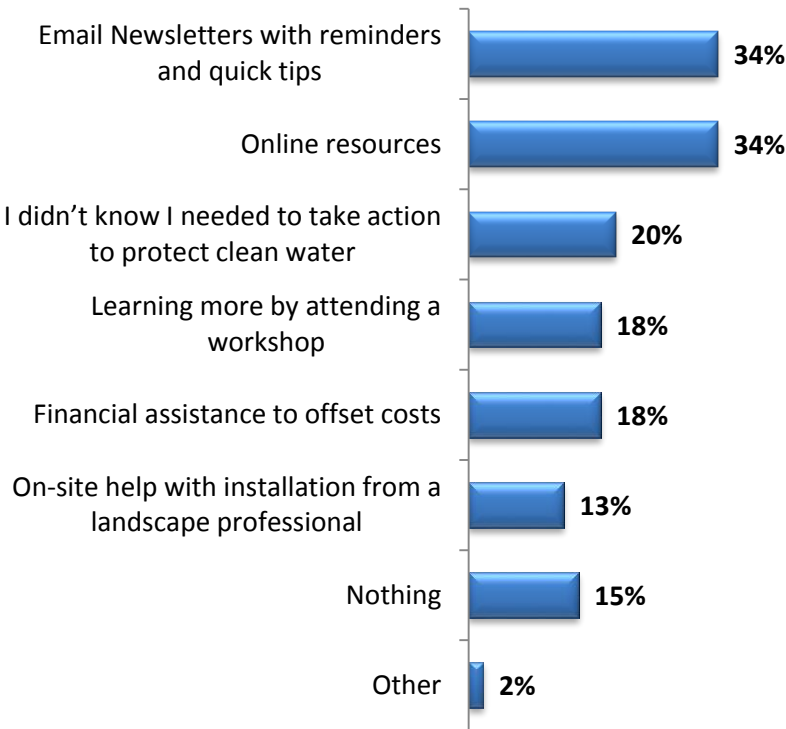
Most Prevents Action	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
I don't know what to do	53%	40%	42%	37%
Nothing	27%	29%	36%	45%
I don't have the time	7%	10%	7%	3%
Won't make a difference	5%	7%	7%	4%
It's not important to me	3%	2%	1%	5%
Too expensive	3%	8%	3%	0%
Physical limitations	2%	3%	2%	3%
Other	0%	1%	2%	3%
<i>N = number of respondents</i>	59	92	115	234

Most Prevents Action	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
I don't know what to do	43%	57%	41%	33%	30%
Nothing	25%	23%	41%	50%	51%
I don't have the time	10%	10%	3%	6%	1%
Won't make a difference	6%	3%	8%	3%	7%
It's not important to me	4%	2%	2%	4%	3%
Too expensive	6%	2%	2%	2%	0%
Physical limitations	5%	2%	1%	2%	3%
Other	1%	1%	2%	0%	5%
<i>N = number of respondents</i>	115	94	103	94	94

Most Prevents Action	Male	Female	Homeowners	Renters	Hispanic Respondents
I don't know what to do	32%	48%	38%	50%	38%
Nothing	41%	35%	42%	24%	30%
I don't have the time	5%	6%	4%	10%	14%
Won't make a difference	8%	3%	5%	7%	2%
It's not important to me	5%	2%	4%	2%	2%
Too expensive	3%	3%	2%	3%	6%
Physical limitations	4%	2%	3%	3%	6%
Other	2%	1%	2%	1%	2%
<i>N = number of respondents</i>	240	260	379	121	50

<i>Most Prevents Action</i>	Single-family Home	Townhouse	Apartment	Condo
I don't know what to do	33%	44%	49%	52%
Nothing	44%	36%	27%	31%
I don't have the time	6%	7%	5%	5%
Won't make a difference	5%	2%	10%	6%
It's not important to me	4%	4%	1%	2%
Too expensive	4%	1%	4%	0%
Physical limitations	2%	5%	3%	3%
Other	2%	1%	1%	1%
<i>N = number of respondents</i>	249	104	81	65

What would help you to take action to protect clean water?



- In another new question added in 2016, approximately one-third (34%) indicated that email newsletters with reminders and quick tips and/or online resources would help them take action to protect clean water.
- Results by subgroup are shown on the following pages. For example, those who have lived in the area for less than 4 years were more likely than others to select “Learning more by attending a workshop.” Those under age 45 were more likely than others to indicate that financial assistance to offset costs would help them take action. Females were more likely than males to select online resources, while males were more likely than females to indicate that nothing would help them take action. Also, those age 65 and older were more likely than others to say nothing would help them take action. When looking at the results by area, those living in Alexandria were less likely than others to indicate that they didn’t know that they needed to take action to protect clean water.

Help Take Action	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Email Newsletters with reminders and quick tips	46%	34%	31%	37%	31%
Online resources	36%	38%	31%	33%	41%
I didn't know I needed to take action to protect clean water	5%	26%	22%	17%	26%
Learning more by attending a workshop	23%	14%	19%	16%	18%
Financial assistance to offset costs	20%	22%	16%	19%	21%
On-site help with installation from a landscape professional	16%	12%	12%	13%	18%
Other	9%	0%	2%	3%	0%
Nothing	7%	17%	17%	14%	15%
<i>N = number of respondents</i>	56	65	270	70	39

Help Take Action	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
Email Newsletters with reminders and quick tips	37%	35%	31%	34%
Online resources	42%	32%	34%	32%
I didn't know I needed to take action to protect clean water	20%	21%	21%	20%
Learning more by attending a workshop	32%	20%	15%	16%
Financial assistance to offset costs	25%	23%	14%	15%
On-site help with installation from a landscape professional	19%	14%	16%	10%
Other	3%	3%	3%	2%
Nothing	10%	16%	10%	19%
<i>N = number of respondents</i>	59	92	115	234

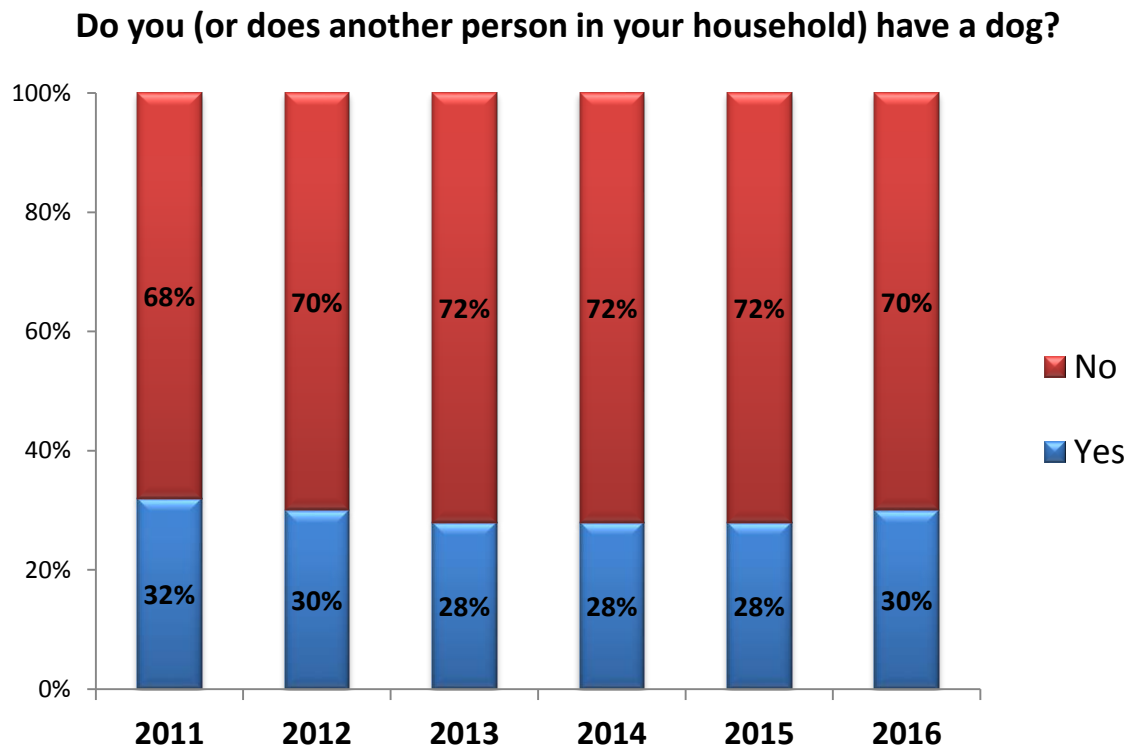
Help Take Action	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Email Newsletters with reminders and quick tips	33%	34%	37%	36%	29%
Online resources	37%	38%	31%	39%	22%
I didn't know I needed to take action to protect clean water	27%	23%	21%	14%	15%
Learning more by attending a workshop	26%	17%	17%	17%	13%
Financial assistance to offset costs	28%	27%	14%	12%	6%
On-site help with installation from a landscape professional	19%	16%	14%	9%	6%
Other	2%	1%	5%	0%	4%
Nothing	10%	6%	10%	18%	34%
<i>N = number of respondents</i>	115	94	103	94	94

Help Take Action	Male	Female	Homeowners	Renters	Hispanic Respondents
Email Newsletters with reminders and quick tips	32%	35%	34%	35%	32%
Online resources	27%	40%	31%	40%	26%
I didn't know I needed to take action to protect clean water	18%	22%	20%	23%	20%
Learning more by attending a workshop	16%	20%	17%	23%	26%
Financial assistance to offset costs	16%	19%	16%	21%	16%
On-site help with installation from a landscape professional	12%	14%	13%	14%	16%
Other	3%	2%	3%	2%	8%
Nothing	21%	10%	16%	12%	12%
<i>N = number of respondents</i>	240	260	379	121	50

Help Take Action	Single-family Home	Townhouse	Apartment	Condo
Email Newsletters with reminders and quick tips	30%	41%	40%	31%
Online resources	32%	33%	44%	29%
I didn't know I needed to take action to protect clean water	19%	25%	21%	17%
Learning more by attending a workshop	17%	19%	20%	22%
Financial assistance to offset costs	17%	20%	21%	12%
On-site help with installation from a landscape professional	14%	13%	16%	3%
Other	2%	3%	2%	3%
Nothing	17%	11%	10%	22%
<i>N = number of respondents</i>	<i>249</i>	<i>104</i>	<i>81</i>	<i>65</i>

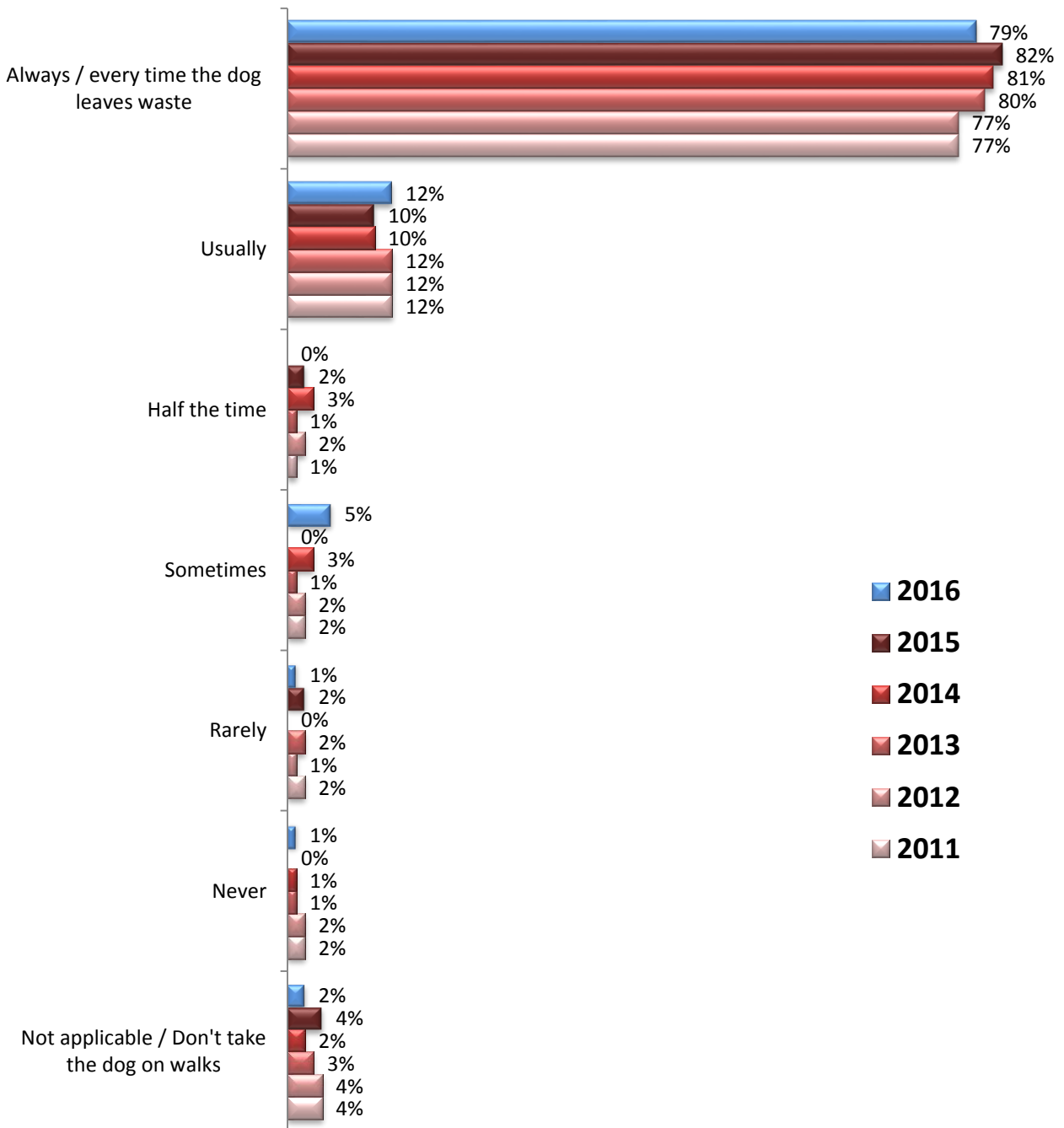
Behavior Among Dog Owners

- More than one-fourth each year indicated that they have a dog (or someone else in their household has a dog).



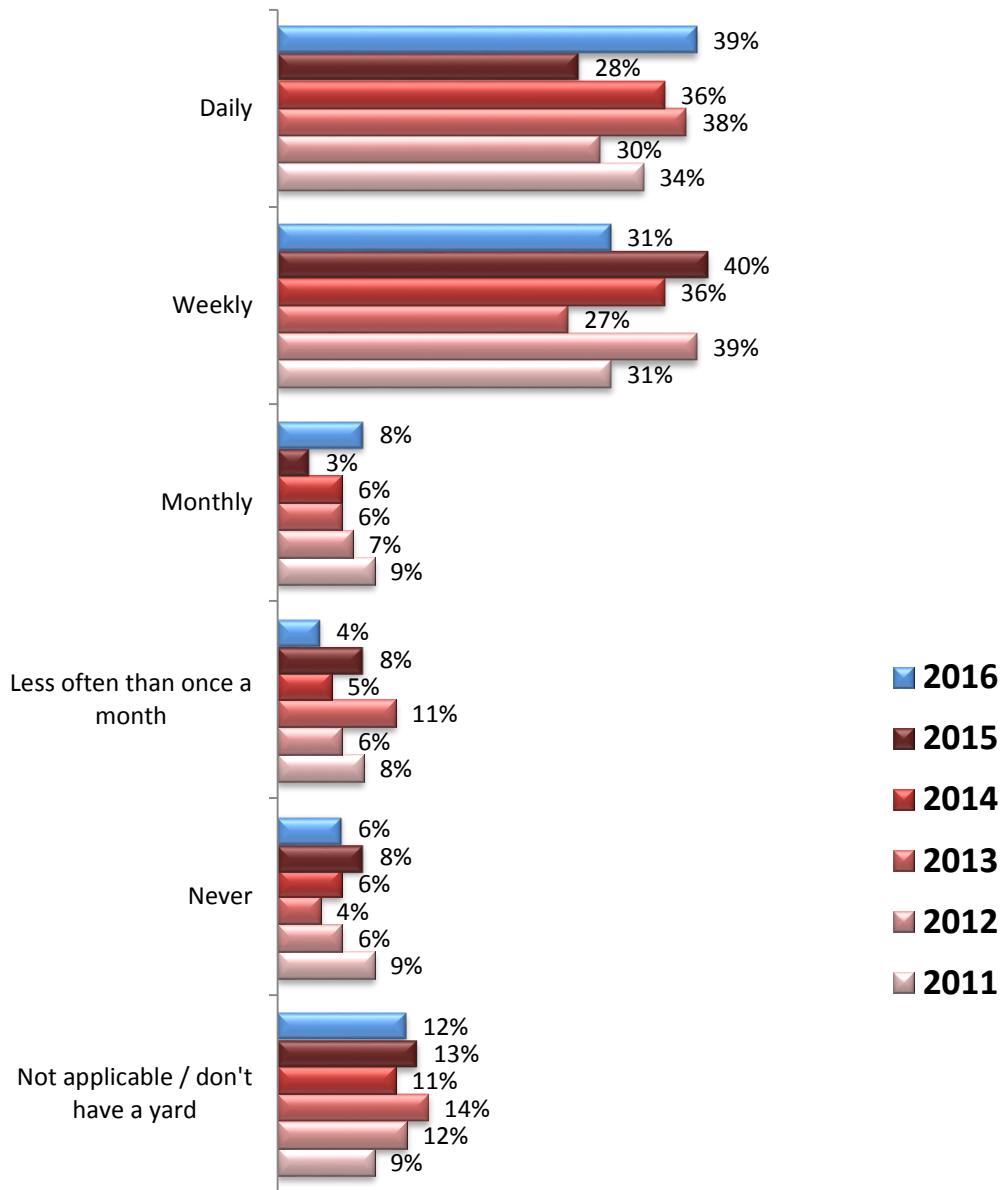
- On the following pages, results are shown for questions about how often dog owners pick up after their dogs and what motivates them to do so.

When taking your dog(s) for a walk, how often do you pick up after your dog(s)?



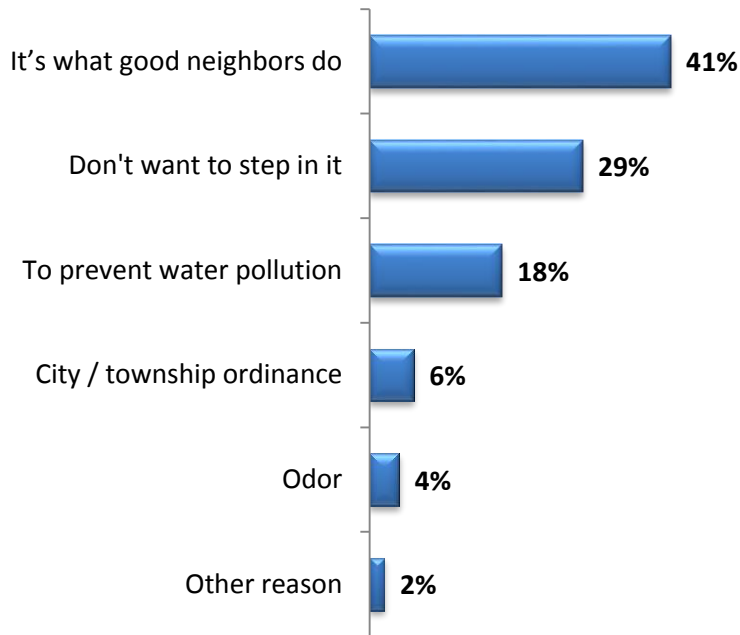
- Nearly eight-in-ten (79%) in 2016 indicated that they *always* pick up after their dog(s) when taking the dog(s) for a walk.

How often do you (or does someone else from your household) remove dog waste from your yard?



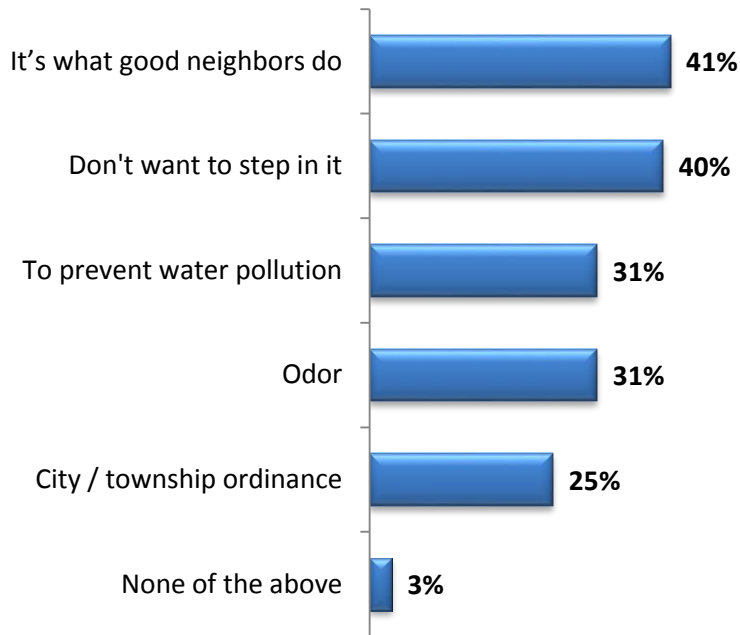
- In their own yard, the majority removed pet waste daily or weekly.
- There was some fluctuation from year to year in the proportions reporting daily and weekly removal of dog waste from their yard, but recall that this question was asked only of dog owners, and the sample size of dog owners is lower than the total sample size, while the margin of error is higher for a lower sample size.

What is the most important reason to pick up after your dog(s)?



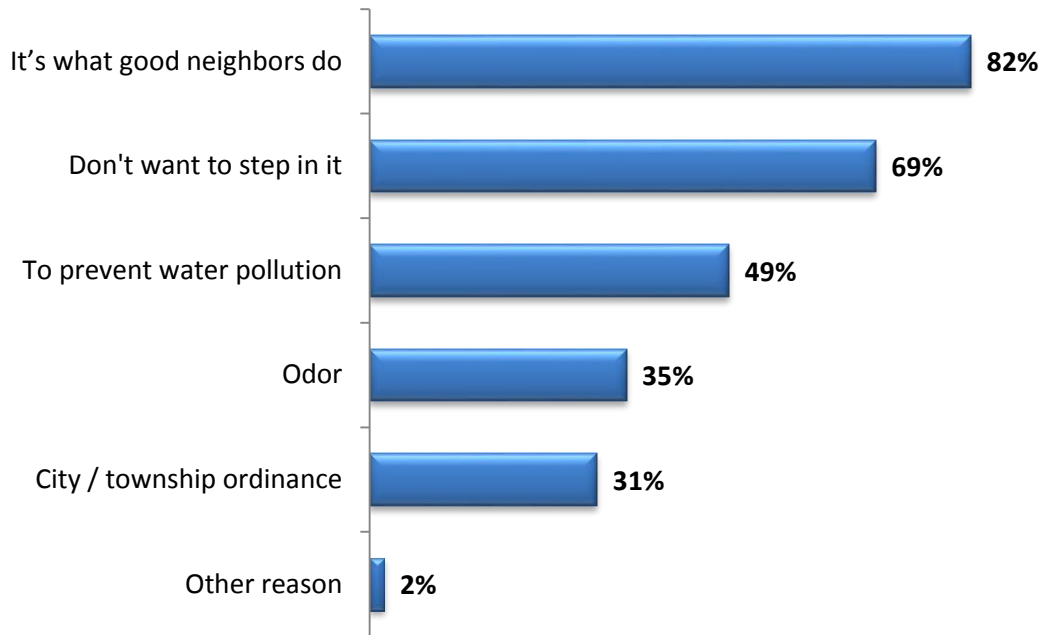
- When asked about the “Most important reason” for picking up after their dog(s), four-in-ten (41%) selected “It's what good neighbors do.” Although a similar question was asked in previous years, comparisons to the past would not be valid due to changes to the response options in the 2016 survey.
- Nearly one-in-five (18%) selected “To prevent water pollution” as the most important reason for picking up after their dog.

What other reasons (if any) have motivated you to pick up after your dog(s)?



- In addition to the *most* important reason for picking up after their dog(s) as shown on the previous page, respondents were also asked to select any other reasons that motivate them. As shown in the chart above, an additional 31% selected “To prevent water pollution” as a motivation. When combining results in the chart above with the chart on the previous page, a total of 49% were motivated to pick up after their dog(s) in order “To prevent water pollution,” as shown on the next page.

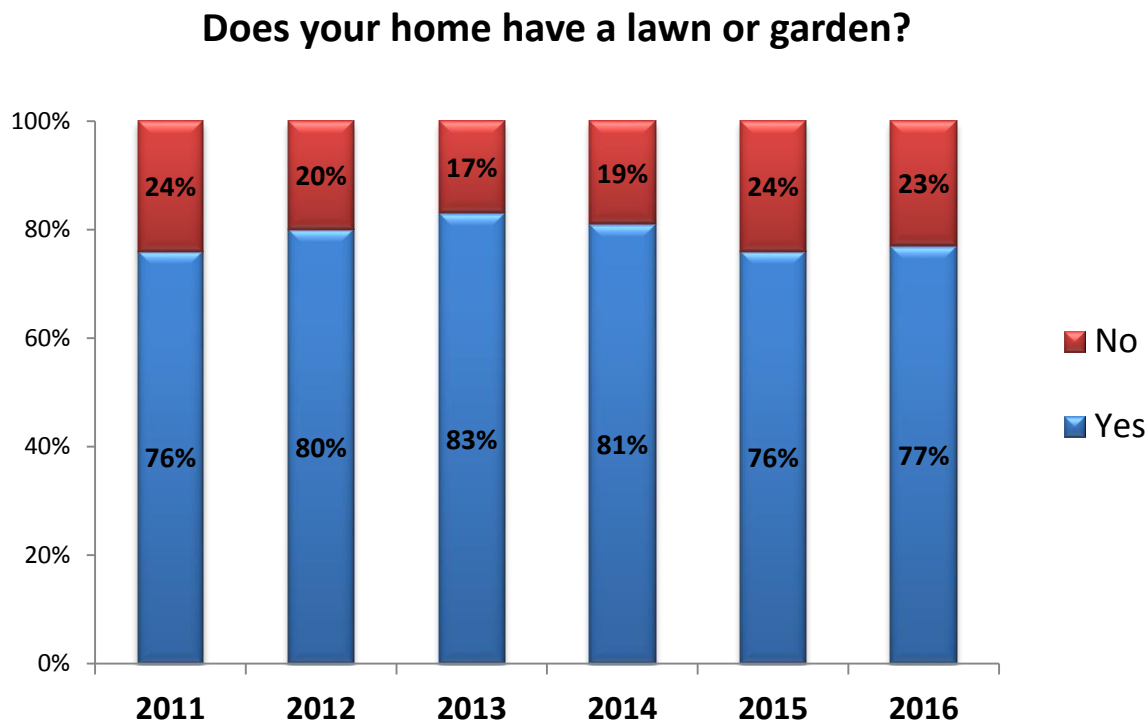
Most important + other reasons motivating dog owners to pick up after your dog(s):



- While it is encouraging to see that nearly half (49%) were motivated to pick up after their dog by wanting to prevent water pollution, this also means that approximately half were not thinking about water pollution in this context.

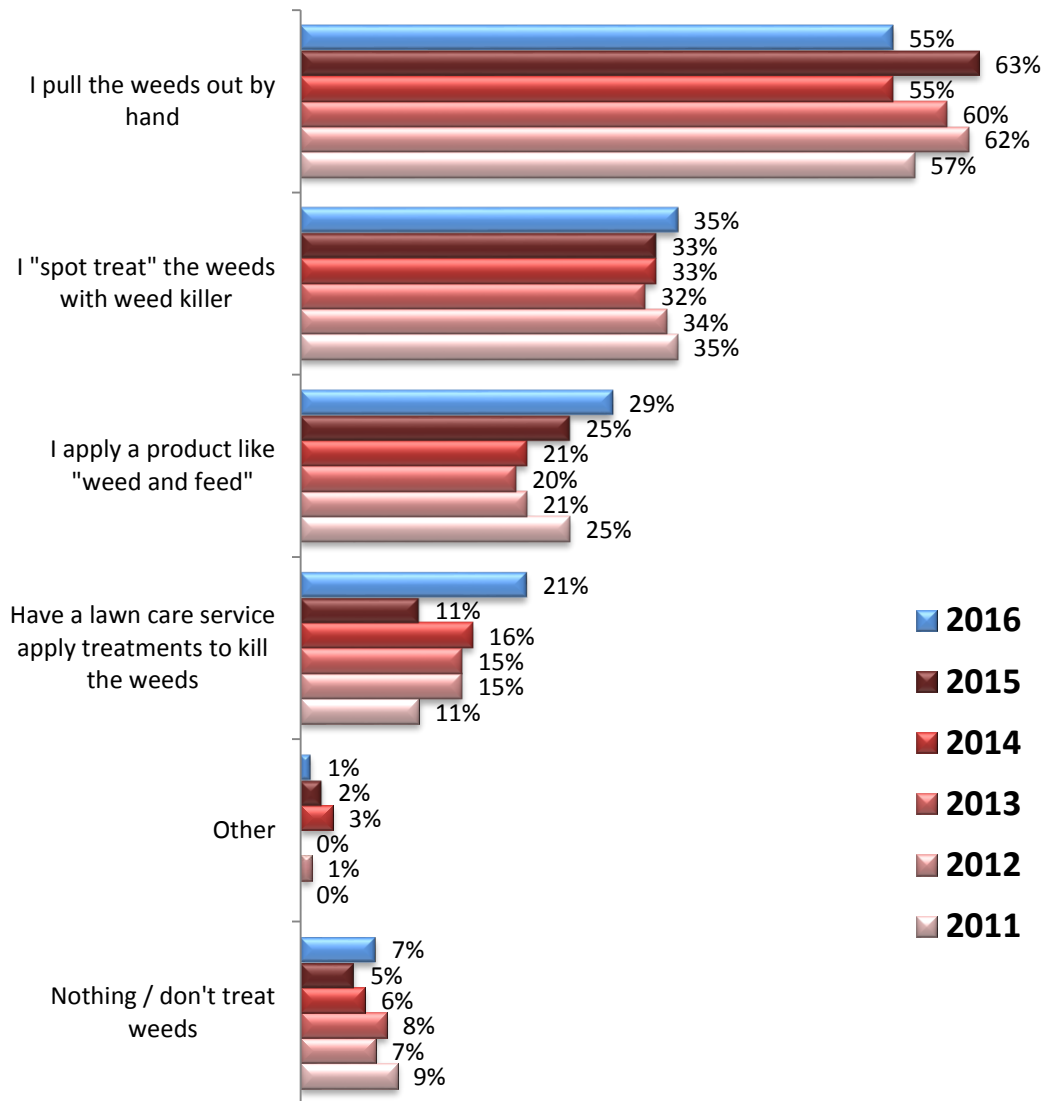
Behavior Related to Lawns & Gardens

- More than three-fourths of the survey respondents each year indicated that their current home has a lawn or garden.



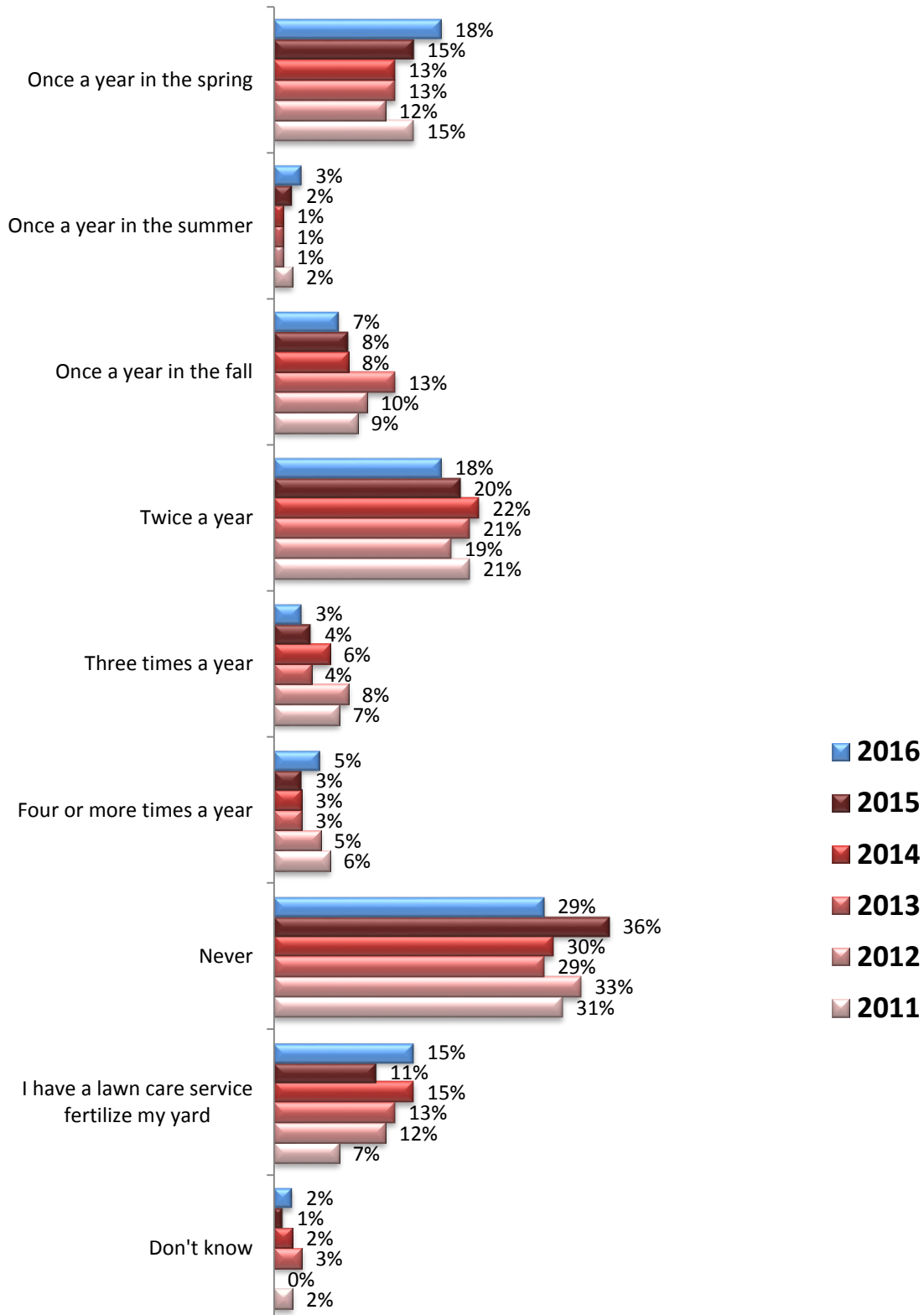
- In a separate question, of the respondents who have a lawn or garden, more than two-thirds (70%) in 2016 identified themselves as the primary person taking care of the lawn or garden. Several questions about lawns and gardens were then asked only of these respondents (i.e., primary person in the household who takes care of the lawn or garden).

How do you treat weeds in your lawn or garden?



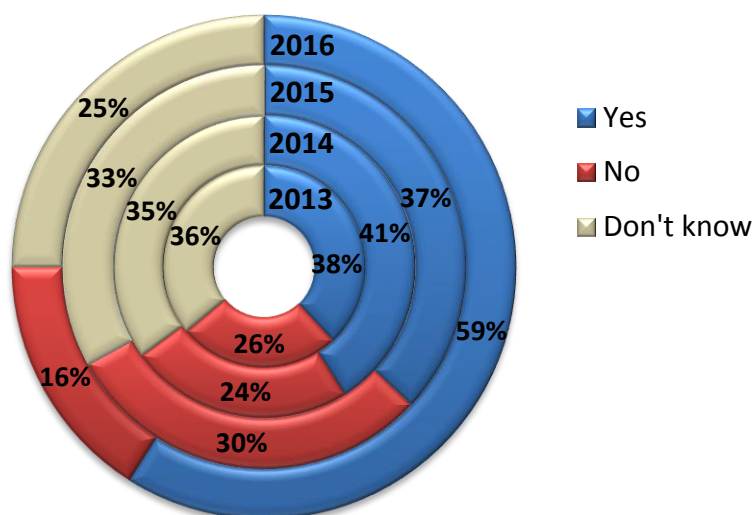
- When dealing with weeds, more than half (55%) reported pulling them out by hand.
- However, it was possible to report more than one way of dealing with weeds. Slightly more than one-third (35%) in 2016 reported using “spot treatments,” and more one-fourth (29%) reported that they apply “weed and feed.” Also, some (21%) have a lawn service apply weed killer.
- On the next page, a chart shows how often norther Virginia residents fertilize their lawn.

Which of the following best describes how often you fertilize your lawn?

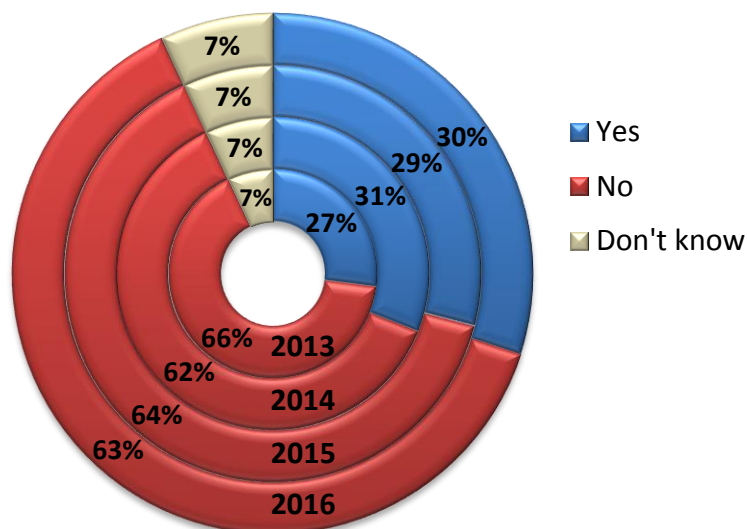


- The next two questions were first asked in the 2013 survey. These results are based only on those who fertilize their lawn (or have a lawn service fertilize their lawn) at least once a year. However, in the previous years, the wording for the first question referred to “slow release N fertilizer.” In 2016, the “N” was removed, and this may have impacted the results.

Do you use a slow release fertilizer?



Have you ever had your soil tested for fertility or pH?



Behavior Related to Changing Vehicle Oil

- When asked about changing the oil in their car or truck, eight-in-ten or more each year reported that they use an oil change service, while 13% in 2016 reported taking old motor oil to a gas station or hazmat facility for recycling. A small number of respondents selected other response options. Because the number selecting some response options was very small, the results are shown in the tables below, with the frequency (number of respondents selecting each response) and the percentage.

2016: When you need to change the oil in your car or truck, what do you do with the old motor oil?

	<i>Frequency</i>	<i>Percent</i>
I don't change the oil myself / I take it to a garage / oil change service	399	79.8%
Take the old motor oil to a gas station or hazmat facility for recycling	65	13.0%
Store it in my garage	9	1.8%
Put it in the trash	8	1.6%
Other	2	0.4%
Don't own a car or truck	17	3.4%
Total	500	100.0%

2015: When you need to change the oil in your car or truck, what do you do with the old motor oil?

	<i>Frequency</i>	<i>Percent</i>
I don't change the oil myself / I take it to a garage / oil change service	426	85.2%
Take the old motor oil to a gas station or hazmat facility for recycling	54	10.8%
Store it in my garage	4	0.8%
Put it in the trash	3	0.6%
Don't own a car or truck	13	2.6%
Total	500	100.0%

2014: When you need to change the oil in your car or truck, what do you do with the old motor oil?

	<i>Frequency</i>	<i>Percent</i>
I don't change the oil myself / I take it to a garage / oil change service	426	85.2%
Take the old motor oil to a gas station or hazmat facility for recycling	50	10.0%
Put it in the trash	5	1.0%
Store it in my garage	4	0.8%
Other	1	0.2%
Don't own a car or truck	14	2.8%
Total	500	100.0%

2013: When you need to change the oil in your car or truck, what do you do with the old motor oil?

	<i>Frequency</i>	<i>Percent</i>
I don't change the oil myself / I take it to a garage / oil change service	427	85.4%
Take the old motor oil to a gas station or hazmat facility for recycling	57	11.4%
Put it in the trash	3	0.6%
Dump it in the gutter or down the storm sewer	2	0.4%
Store it in my garage	1	0.2%
Don't own a car or truck	10	2.0%
Total	500	100.0%

2012: When you need to change the oil in your car or truck, what do you do with the old motor oil?

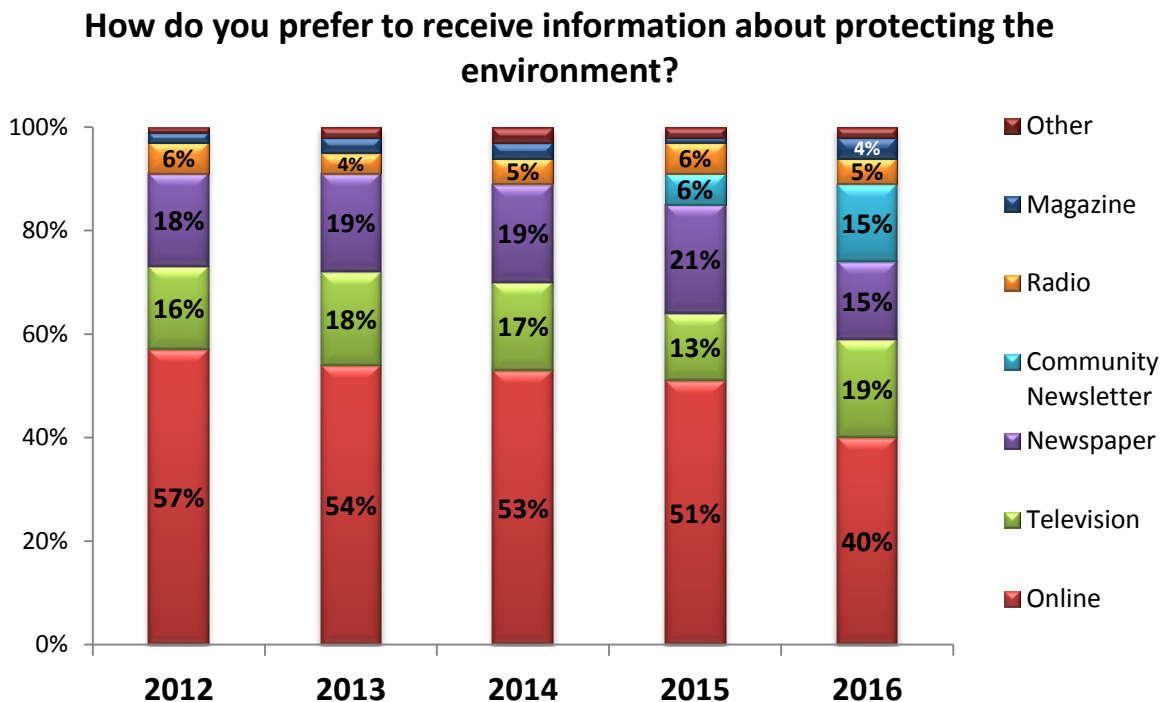
	<i>Frequency</i>	<i>Percent</i>
I don't change the oil myself / I take it to a garage / oil change service	426	85.2%
Take the old motor oil to a gas station or hazmat facility for recycling	49	9.8%
Store it in my garage	3	0.6%
Put it in the trash	2	0.4%
Other	2	0.4%
Don't own a car or truck	18	3.6%
Total	500	100.0%

2011: When you need to change the oil in your car or truck, what do you do with the old motor oil?

	<i>Frequency</i>	<i>Percent</i>
I don't change the oil myself / I take it to a garage / oil change service	413	82.6%
Take the old motor oil to a gas station or hazmat facility for recycling	60	12.0%
Put it in the trash	2	0.4%
Other	2	0.4%
Don't own a car or truck	23	4.6%
Total	500	100.0%

Preference for Receiving Information

- The wording for the question below was changed in the 2016 survey. In previous years, the question was, “How do you prefer to receive information?” without a reference to protecting the environment. (“Community Newsletter” was first added as an option in 2015.)



- In each of the areas included in the survey, more preferred to receive information online than preferred to receive information from other particular sources, as shown below. This was true for other subgroups as well, except for those age 65 or older.

Preference for Receiving Information	Alexandria	Arlington	Fairfax Inclusive	Leesburg / Loudoun	Dumfries / Stafford
Online	44%	48%	39%	39%	38%
Television	21%	8%	22%	17%	15%
Newspaper	11%	20%	15%	12%	18%
Community Newsletter	18%	6%	16%	23%	10%
Radio	2%	6%	4%	4%	8%
Magazine	2%	6%	3%	4%	8%
Other	2%	6%	1%	1%	3%
<i>N = number of respondents</i>	56	65	270	70	39

Preference for Receiving Information	Have Lived in Northern Virginia < 4 Years	4 to 9 Years	10 to 19 Years	20 or More Years
Online	53%	51%	42%	32%
Television	12%	12%	14%	26%
Newspaper	9%	13%	10%	20%
Community Newsletter	17%	12%	22%	13%
Radio	3%	8%	4%	4%
Magazine	3%	3%	5%	4%
Other	3%	1%	3%	1%
<i>N = number of respondents</i>	59	92	115	234

Preference for Receiving Information	Age 21 to 34	35 to 44	45 to 54	55 to 64	65 +
Online	46%	55%	40%	35%	26%
Television	16%	14%	14%	28%	24%
Newspaper	10%	5%	14%	15%	31%
Community Newsletter	11%	16%	23%	14%	13%
Radio	9%	5%	3%	4%	1%
Magazine	5%	4%	4%	2%	4%
Other	3%	1%	2%	2%	1%
<i>N = number of respondents</i>	115	94	103	94	94

Preference for Receiving Information	Male	Female	Homeowners	Renters	Hispanic Respondents
Online	43%	38%	38%	49%	44%
Television	18%	20%	18%	22%	22%
Newspaper	20%	10%	17%	7%	6%
Community Newsletter	10%	20%	17%	10%	10%
Radio	2%	7%	4%	6%	8%
Magazine	5%	3%	4%	3%	6%
Other	2%	2%	2%	3%	4%
<i>N = number of respondents</i>	240	260	379	121	50

<i>Preference for Receiving Information</i>	Single-family Home	Townhouse	Apartment	Condo
Online	36%	43%	50%	41%
Television	18%	19%	22%	15%
Newspaper	20%	6%	7%	20%
Community Newsletter	15%	22%	7%	17%
Radio	4%	6%	6%	3%
Magazine	5%	3%	4%	2%
Other	2%	1%	4%	2%
<i>N = number of respondents</i>	249	104	81	65

Appendix: Questionnaire

2016 Only Rain NVRC Survey

INTRODUCTION:

Welcome, and thank you for participating in this important research survey.

S1. Are you:

- ☐ Male
- ☐ Female

S2. Which of the following categories includes your age?

- ☐ Under 18 **[END SURVEY]**
- ☐ 18 to 20 **[END SURVEY]**
- ☐ 21 to 24
- ☐ 25 to 34
- ☐ 35 to 44
- ☐ 45 to 54
- ☐ 55 to 64
- ☐ 65 to 74
- ☐ 75 or older

S3. Do you own or rent your home?

- ☐ I own my home
- ☐ I rent my home
- ☐ Neither **[END SURVEY]**

S4. Do you live in the state of Virginia?

- ☐ Yes
- ☐ No **[END SURVEY]**

S5. Which of the following best describes where you live (county or city or town)?

- ☐ Alexandria
- ☐ Arlington
- ☐ Dumfries
- ☐ City of Fairfax
- ☐ Fairfax County
- ☐ Falls Church
- ☐ Herndon
- ☐ Leesburg
- ☐ Loudoun County
- ☐ Stafford County
- ☐ Vienna
- ☐ None of the above **[END SURVEY]**

S6. Which of the following describes your ethnicity? (Please select all that apply)

- ☐ African American / Black
- ☐ American Indian / Alaska Native
- ☐ Asian
- ☐ Hispanic / Latino
- ☐ Native Hawaiian / Pacific Islander
- ☐ White / Caucasian
- ☐ Other

Q1. Which of the following best classifies your current residence?

- ☐ Single-family home
- ☐ Townhouse or attached house
- ☐ Apartment
- ☐ Condominium
- ☐ Mobile home or manufactured home
- ☐ Cooperative
- ☐ Other

Q2. For how many years have you lived in your current residence?

- ☐ Less than 1 year
- ☐ 1 to 3 years
- ☐ 4 to 9 years
- ☐ 10 to 19 years
- ☐ 20 or more years

Q3. For how many years have you lived in Northern Virginia?

- ☐ Less than 1 year
- ☐ 1 to 3 years
- ☐ 4 to 9 years
- ☐ 10 to 19 years
- ☐ 20 or more years

Q4. Do you live within the Potomac River Watershed?

- ☐ Yes
- ☐ No
- ☐ Not Sure
- ☐ I do not know what a “watershed” is

Q5. What do you think is the number one cause of pollution in local streams, the Potomac River, and the Chesapeake Bay? (Please select only one)

- ☐ Factories / Industrial waste
- ☐ Fertilizers and pesticides from lawns and farms
- ☐ Local Garbage / trash / litter
- ☐ Gas, oil and exhaust from automobiles
- ☐ Pet waste
- ☐ Stormwater runoff from streets and parking lots
- ☐ Other: _____

Q6. "Stormwater" runoff is rain or other water that flows into the street, along the gutter and into the storm drain. To the best of your knowledge, where do you believe storm water eventually ends up?

- ☐ At a waste water treatment facility
- ☐ Local streams, Potomac River or Chesapeake Bay
- ☐ Underground / seeps in to the ground
- ☐ Don't know
- ☐ Other: _____

Q7. Do you (or does another person in your household) have a dog?

- ☐ Yes **[CONTINUE WITH Q8]**
- ☐ No **[SKIP TO Q11]**

Q8. When taking your dog(s) for a walk, how often do you (or someone else from your household) pick up waste after your dog(s)?

- ☐ Always / every time the dog leaves waste
- ☐ Usually
- ☐ Sometimes
- ☐ Rarely
- ☐ Never
- ☐ Not applicable / I don't take the dog(s) on walks

Q9. How often do you (or does someone else from your household) remove dog waste from your yard?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Less often than once a month
- ☐ Never
- ☐ Not applicable / don't have a yard

[SKIP OVER Q10a/b IF NEVER OR NOT APPLICABLE IN BOTH Q8 AND Q9]

Q10a. What is the most important reason to pick up after your dog(s)? (Please select only one)

- ☐ City / township ordinance
- ☐ Don't want to step in it
- ☐ To prevent water pollution
- ☐ It's what good neighbors do
- ☐ Odor
- ☐ Other reason
- ☐ None / no reason to **[SKIP TO Q11]**

Q10b. What other reasons (if any) have motivated you to pick up after your dog(s)? [PROGRAMMING NOTE: DON'T SHOW WHAT WAS SELECTED IN Q10a]

- ☐ City / township ordinance
- ☐ Don't want to step in it
- ☐ To prevent water pollution
- ☐ It's what good neighbors do
- ☐ Odor
- ☐ None of the above

Q11. Does your home have a lawn or garden?

- ☐ Yes **[CONTINUE WITH Q12]**
- ☐ No **[SKIP TO Q17]**

Q12. Are you the primary person who takes care of the lawn or garden?

- ☐ Yes **[CONTINUE WITH Q13]**
- ☐ No **[SKIP TO Q17]**

Q13. How do you treat weeds in your lawn or garden? (Select all that apply)

- ☐ I apply a product like "weed and feed" that contains weed treatment and fertilizer
- ☐ I "spot treat" the weeds with weed killer
- ☐ I pull the weeds out by hand
- ☐ I have a lawn care service apply treatments to kill the weeds
- ☐ Other
- ☐ Nothing / I don't treat weeds / leave the weeds alone

Q14. Which of the following best describes how often you fertilize your lawn?

- ☐ Once a year in the spring
- ☐ Once a year in the summer
- ☐ Once a year in the fall
- ☐ Twice a year
- ☐ Three times a year
- ☐ Four or more times a year
- ☐ Never **[SKIP TO Q16]**
- ☐ I have a lawn care service fertilize my yard
- ☐ Don't know

Q15. Do you use a slow release fertilizer in your lawn or garden?

- ☐ Yes
- ☐ No
- ☐ I don't know

Q16. Have you ever had your soil tested for fertility or pH?

- ☐ Yes
- ☐ No
- ☐ I don't know

Q17. What most prevents you from taking action to protect clean water?

- ☐ It's not important to me
- ☐ I don't have the time
- ☐ Too expensive
- ☐ My actions won't make a difference
- ☐ I don't know what to do
- ☐ I have physical limitations
- ☐ Nothing / I do take action to protect clean water
- ☐ Other: _____

Q18. What would help you to take action to protect clean water? (Select all that apply)

- ☐ On-site help with installation from a landscape professional
- ☐ Learning more by attending a workshop
- ☐ Online resources
- ☐ Financial assistance to offset costs
- ☐ Email Newsletters with reminders and quick tips
- ☐ I didn't know I needed to take action to protect clean water
- ☐ Nothing
- ☐ Other: _____

Q19. When you need to change the oil in your car or truck, what do you do with the old motor oil?

- ☐ I don't change the oil myself / I take it to a garage / oil change service
- ☐ Take the old motor oil to a gas station or hazmat facility for recycling
- ☐ Store it in my garage
- ☐ Put it in the trash
- ☐ Dump it in the gutter or down the storm sewer
- ☐ Dump it down the sink
- ☐ I don't own a car or truck
- ☐ Other

Q20. How important do you think it is for local governments to spend more money on protecting water quality?

- ☐ Not at all important
- ☐ Not too important
- ☐ Somewhat important
- ☐ Very important

----- Page Break -----

Q21. What TV service provider do you use?

- ☐ Comcast
- ☐ Cox
- ☐ Direct TV
- ☐ Dish Network
- ☐ Verizon
- ☐ Xfinity
- ☐ Do not have cable or satellite TV
- ☐ Do not watch TV
- ☐ I only watch streamed Video Content (ex. Netflix, Hulu, YouTube, Chromecast, etc.)
- ☐ Other

Q22. Which of these channels have you watched in the past 30 days? (Select all that apply)

- ☐ Animal Planet
- ☐ Cartoon Network
- ☐ CNN
- ☐ E! Entertainment TV
- ☐ ESPN
- ☐ HeadLine News
- ☐ History Channel
- ☐ HGTV
- ☐ National Geographic
- ☐ Oxygen
- ☐ None of the above

----- Page Break -----

Q23. Please view the video above. Have you seen this ad, or a similar one on TV or the Internet about reducing water pollution?

- ☐ Yes **[CONTINUE WITH Q24]**
- ☐ No **[SKIP TO Q25]**
- ☐ Not sure **[SKIP TO Q25]**

Q24. Did seeing this ad make you take action on your property to prevent water pollution?
(Select all that apply)

- ☐ Yes, I now pick up pet waste more often
- ☐ Yes, I now plan to fertilize fewer times during the year
- ☐ Yes I now properly dispose of motor oil
- ☐ I was already doing what is recommend to reduce water pollution
- ☐ None of the above applies to me



Q25. Have you seen the logo above anywhere? (Show Only Rain logo)

- ☐ Yes
- ☐ No

Q26. How do you prefer to receive information about protecting the environment? (Please select only one)

- ☐ Magazine
- ☐ Newspaper
- ☐ Community newsletter
- ☐ Online
- ☐ Radio
- ☐ Television
- ☐ Other: _____

From: Alexandria eNews <conf-482762536@everbridge.net>
Sent: Monday, May 16, 2016 9:56 AM
To:
Subject: Clean Up After Your Dog and Protect the Chesapeake Bay

You are subscribed to the City of Alexandria's free eNews service. Replies to this message will not be received. For correspondence, please use the contact information in the body of the message.

Eco-City Alexandria: Get Involved!

Clean Up After Your Dog and Protect the Chesapeake Bay

Pet Waste Can Impact Water Quality

Did you know that pet waste can contain harmful germs and bacteria like E. coli, Salmonella, and Fecal Coliform? Pet waste is also high in nitrogen and phosphorous, nutrients that negatively affect our waters and make it hard for fish and other aquatic life to stay alive. Pet waste left on the ground near streets and sidewalks gets washed into storm drains by rain and snow melt. The water entering the storm drain is not treated and flows directly into our streams and rivers.

That means the germs, bacteria, and nutrients from pet waste left on the ground can get into our streams and rivers and can be harmful to the environment, wildlife, and humans. That is why picking up after your pet is so important!

Here's what we can all do to love our pets and the environment:

- Always clean up after your pet. Be prepared and carry bags with you to pick up pet waste.
- Dispose of pet waste properly. Bag it and place in a trash can.
- Never dispose of pet waste in a storm drain.
- Encourage other pet owners to be responsible.

Visit the [Stormwater Management Division](#) page for more ideas on how you can help protect our local streams and the Chesapeake Bay.

To change your subscription choices, [click here to login](#). To request removal of your account, email enews@alexandriava.gov.

From: Alexandria eNews <conf-814169818@everbridge.net>
Sent: Wednesday, June 29, 2016 4:30 PM
To:
Subject: Safely Enjoy Local Streams with Your Dog This Summer and Protect the Chesapeake

You are subscribed to the City of Alexandria's free eNews service. Replies to this message will not be received. For correspondence, please use the contact information in the body of the message.

Eco-City Alexandria: Get Involved!

Safely Enjoy Local Streams with Your Dog This Summer and Protect the Chesapeake Bay

Summer in Alexandria is a great time to get outside with your dog. The City has many parks, open space areas, and [fenced and unfenced dog parks](#) that you can enjoy with your dog.

Here are some tips to help you and your dog safely enjoy our streams this summer:

- Remember to carry plenty of drinking water for you and your dog. Water in streams or lakes may look clean, but there could be bacteria in the water that you can't see that makes it not safe to drink.
- Be careful in summer heat. Try to limit activity during the hottest part of the day and stay in the shade where you can.
- If your dog likes to wade in streams, be sure to check for discolored water, broken glass, or sharp rocks before entering the water.
- Carry bags and pick up after your dog. Pet waste left on the ground gets washed into storm drains or streams by rain. Remember to place the bagged waste in a trash can!

Visit the [Stormwater Management Division](#) page for more ideas on how to enjoy and protect our local streams and the Chesapeake Bay.

To change your subscription choices, [click here to login](#). To request removal of your account, email enews@alexandriava.gov.



Transportation & Environmental Services, City of Alexandria, Virginia

June 14 at 9:55am · 🌐

FYI:: How much do you know about stormwater and water quality?

Did you know that picking up after your dog also protects water quality? Dog poop contains bacteria and is high in nitrogen and phosphorus (nutrients that negatively affect our waters). Dog poop that's not picked up gets washed into our storm drains and streams and hurts water quality. You can make a difference by being a responsible pet owner and picking up after your dog!

For more information, visit our partners over at Northern Virginia Clean Waters: <http://www.onlyrain.org/dog-lovers/>

"Only Rain Down the Storm Drain"



👍 Like

💬 Comment



VIDEOS



VISITOR POSTS



Julie Moses

June 25 at 9:44am

Lumberjack, aka The Enthusiast on bird feeder duty.



Animal Welfare League of Alexandria

52 mins ·

This morning we share an important message from our partners at Transportation & Environmental Services, City of Alexandria, Virginia

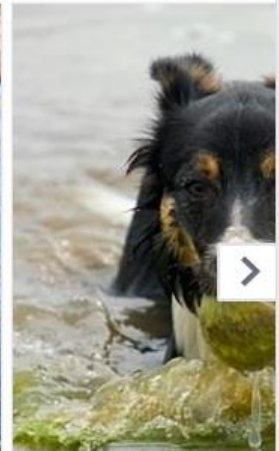
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For more information, visit our partners over at Northern Virginia Clean Waters: <http://www.onlyrain.org/dog-lovers/>

"Only Rain Down the Storm Drain"



Dog Lovers Can Help Keep the Water Clean! | Northern Virginia Clean Water Partners



Dog Lovers Can Help Keep the Water Clean! | Northern Virginia Clean Water Partners



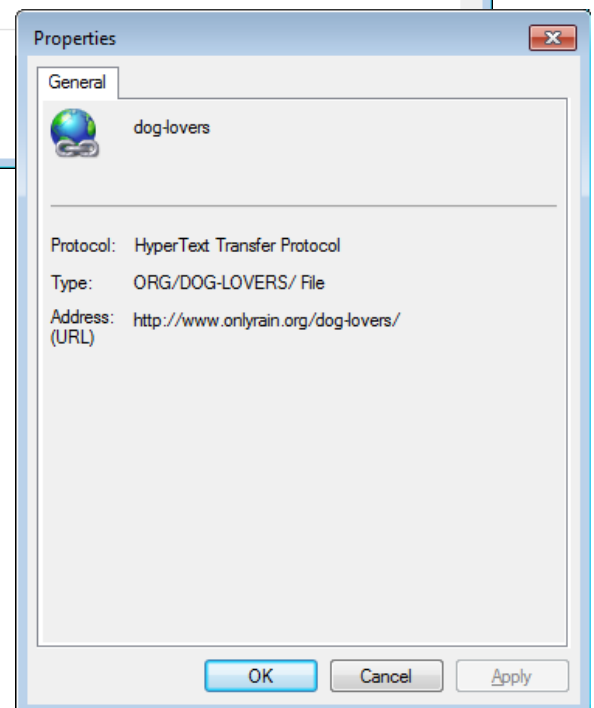
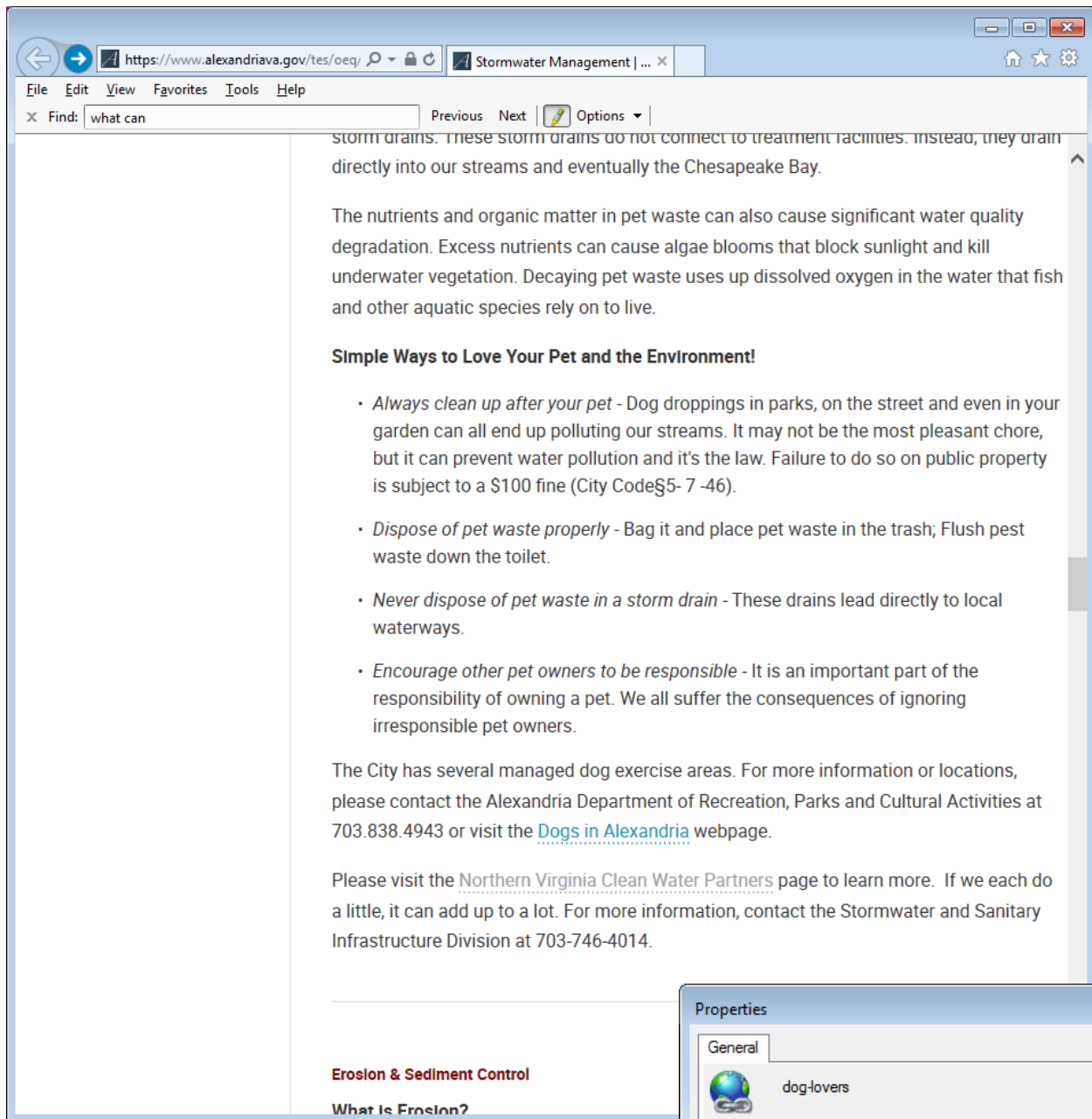
Like



Comment



Share



What's grosser than picking up pet waste?

Stepping in it. Know what's even grosser than that? Swimming in, fishing from, and drinking water that has pet poop in it! Please pick up after your pet!

When it rains, pet waste left on the ground, especially near streets and sidewalks, gets washed into storm drains and drainage ditches which flow to your local waterways... without being treated! Not only is picking up after your pet the neighborly thing to do, it's the healthy thing to do...for you and the environment!



Thank you for helping to
keep our waters clean!



For more information or questions about the
stormwater program contact:



City of Alexandria
Transportation & Environmental Services
Stormwater Management Division
2900-B Business Center Drive
Alexandria, VA 22314
Phone: 703.746.4014
www.alexandriava.gov

Publication date 4/1/2016

ECO-CITY  **ALEXANDRIA**

When nature calls...

Please pick up after your pet!





THE PROBLEM

Storm drains are not connected to wastewater treatment plants like the drains in your home. When pet waste is tossed into a storm drain or left on the sidewalk, street or yard, it is carried by rainwater through the storm sewer system directly into our local water bodies, without any treatment!

Pet waste is a threat to human and environmental health because it contains harmful bacteria and pathogens, some of which can cause serious diseases in humans. Pet waste also contains many other nutrient pollutants, which contribute to excessive algae growth in a water body. When these algae die, they are eaten by bacteria which depletes the water of oxygen. This can lead to death of the aquatic insects and fish in the area.

THE SOLUTION

Proper ways to dispose of pet waste include:

- Bag and place pet waste in the trash.
- Never dispose of pet waste in a storm drain. These drains lead directly to local waterways.
- Never dump used kitty litter outside. Throw it in the trash.

Encourage other pet owners to be responsible. It is an important part of the responsibility of owning a pet.

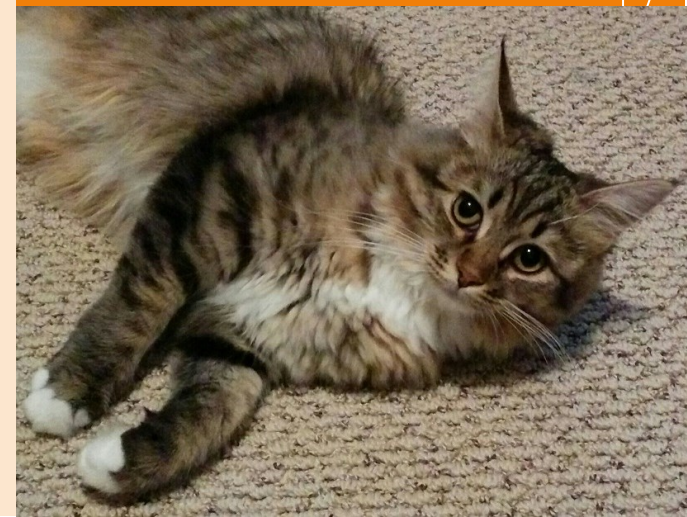
Are you polluting our waters?

Did you know that most of Alexandria's streams exceed Virginia's water quality standards for fecal coliform and/or E. coli bacteria?

Numerous studies clearly link pet waste to waterborne bacterial pollution.

Once in our rivers, lakes, and streams, the bacteria and pathogens end up in fish and other aquatic life.

When you dispose of pet waste improperly, raw sewage gets introduced into the places we swim, boat, fish, and gather food and water!



[about us](#) [hours / directions](#) [careers](#) [accountability](#) [EIN, CFC, UW numbers](#) [faqs](#)


Go

Pet Waste that Is Not Picked Up Can Pollute Our Waters

When it rains, pet waste left on the ground, especially near streets and sidewalks, gets washed into storm drains which flow directly into our waterways. Most of Alexandria's streams exceed Virginia's water quality standards for fecal coliform and / or E.coli bacteria. Numerous studies clearly link pet waste to waterborne bacterial pollution. Storm drains are not connected to wastewater treatment plans like the drains in your home. So, if you don't pick up your dog's waste, it can go into our water ways and result in harmful bacteria.

Proper ways to dispose of pet waste include:

Bag and place pet waste in the trash

Never dispose of pet waste in a storm drain. These drains lead directly to local waterways.

Never dump used kitty litter outside. Throw it in the trash.

Encourage other pet owners to be responsible.



SHARE THIS:



JOIN US

as we care for thousands of homeless animals. Every gift counts and every dollar makes a difference for our residents.

[DONATE NOW »](#)

SIGN UP FOR OUR NEWSLETTER

your email address

your first name

Go

AWLA NEWSLETTER



[Click here](#) to read our winter newsletter!

OTHER ADOPTABLE ANIMALS

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Jeff Lutton, Chair
Lynnwood G. Campbell, Treasurer
Jackie Cottrell, Secretary
Kirk S. Fedder
Suzanne Goulden
Jerry Hinn, DVM
Tina Leone
Sharon McMichael

CONNECT WITH AWLA



SHARE AWLA:



WHERE YOU CAN FIND US

VOLA LAWSON ANIMAL SHELTER
4101 EISENHOWER AVE
ALEXANDRIA, VA 22304
703-746-4774 (PHONE)
703-746-4775 (FAX)

[HOURS AND DIRECTIONS »](#)

[DONATE TODAY!](#)

From: Alexandria eNews <conf-770035902@everbridge.net>
Sent: Friday, June 24, 2016 1:09 PM
To:
Subject: Only Rain Down the Drain: Protect the Chesapeake Bay

You are subscribed to the City of Alexandria's free eNews service. Replies to this message will not be received. For correspondence, please use the contact information in the body of the message.

Eco-City Alexandria: Get Involved!

Only Rain Down the Drain: Protect the Chesapeake Bay

Did you know that stormwater is not treated? Storm drains are connected directly to our local streams and waterways. That means that anything that is left on a hard surface, like parking lots and roads, or put directly into a storm drain, will eventually end up in our streams. Imagine rinsing your paint brush or emptying a mop bucket in the middle of the Potomac River. That's what it's like when you wash anything on a paved surface or down the storm drain.

Remember, only rain down the storm drain!

Here's what you can do to help protect our local streams:

- Properly use and dispose of household chemicals. The City's [Household Hazardous Waste & Electronics Recycling](#) (HHW) program on Colvin Street helps residents with proper disposal.
- Take used oil and automotive fluids to a local service station or the HHW site for recycling.
- Wash paintbrushes, mops, or other cleaning tools indoors to keep dirty water and harmful chemicals out of our streams. Never wash tools in the street or into a storm drain.
- Keep our City litter free. Any litter you drop in the street, on the sidewalk, or in a park will likely end up in a local stream.

Visit the [Stormwater Management Division](#) page for more ideas on how you can help protect our local streams, the Potomac River, and the Chesapeake Bay.

To change your subscription choices, [click here to login](#). To request removal of your account, email enews@alexandriava.gov.

From: Alexandria eNews <conf-578870354@everbridge.net>
Sent: Wednesday, June 01, 2016 11:03 AM
To:
Subject: Volunteer for the 28th Annual Clean the Bay Day

You are subscribed to the City of Alexandria's free eNews service. Replies to this message will not be received. For correspondence, please use the contact information in the body of the message.

Volunteer for the 28th Annual Clean the Bay Day

Save the Date: Saturday, June 4 from 9 – 11 a.m.

June 4-12, 2016 was recently designated Chesapeake Bay Awareness Week by Maryland, Pennsylvania and, Virginia. As part of this week and in conjunction with the 28th annual Clean Bay Day, the City, in partnership with the Chesapeake Bay Foundation, will host a Clean the Bay Day site at Four Mile Run Park, located at the end of 3700 Commonwealth Avenue.

Volunteers all over Virginia, from the Eastern Shore to the Shenandoah Valley, work by land and boat to give the Bay a massive spring cleaning every year. Enlisted men and women, scout groups, churches, small businesses, large corporations and thousands of individuals and families turn out every year for Clean the Bay Day. Since 1989, Clean the Bay Day has engaged over 140,000 volunteers, who have removed approximately 6.2 million pounds of debris from nearly 6,500 miles of shoreline in Virginia!

Volunteers interested in participating need to RSVP to Joni Calmbacher at joni.calmbacher@alexandriava.gov.


To change your subscription choices, [click here to login](#). To request removal of your account, email enews@alexandriava.gov.

← → ↺

https://www.facebook.com/TESAlexandriaVA/

☆ ASD d

REVIEWS




Micah MacDonald

Similar to Kate's recommendation, but in a different area.

Please consider making the right-most left-turn-only lane on ... See More


September 28, 2012 · 🌐



Tell people what you think


★★★★★

PEOPLE ALSO LIKE




Local Motion, City of Alexandria, Vi...

Government Organization



Recreation, Parks & Cultural Activit...


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Arlington County Environmental Se...




Local Motion, City of Alexandria, Vi...



Woodrow Wilson Memorial Bridge

Places > Alexandria, Virginia > Community & Government

> Government Organization > Transportation & Environmental Services, City of Alexandria, Virginia



Transportation & Environmental Services, City of Alexandria, Virginia

April 12 at 10:35am · 🌐


SPRING FLING:: The City's Spring Fling is underway and we are hard at work getting the City spring ready. Want to help? Check out a few ways to help prevent litter and keep Alexandria pristine.

1)Be sure to secure your trash on collection days by closing the lid on your receptacle.

2) Visit alexandriava.gov/19182 to learn how you can Adopt-a-Block in your neighborhood.

3)Choose reusable bottles and bags instead of plastic.

4) Please remember that storm drains are not trash cans there are ornamental trash and recycling cans throughout the City for trash disposal on the go.




Street Cleaning

The Street Cleaning program is responsible for street sweeping and cleaning throughout the City. The crews sweep approximately 30,000 lane miles each year. The Street Cleaning program is also responsible for annual collection of leaves...

ALEXANDRIA.VA.GOV

Share

Huayra Hassan likes this.



Transportation & Environmental Services, City of Alexandria, Virginia

April 11 at 11:06am · 🌐

PAVING:: The City is conducting a triennial survey of pavement conditions to prioritize road paving and resurfacing resources. A Paving Condition Index will be used to rank street segments according to need and create a



Like · Comment · Share



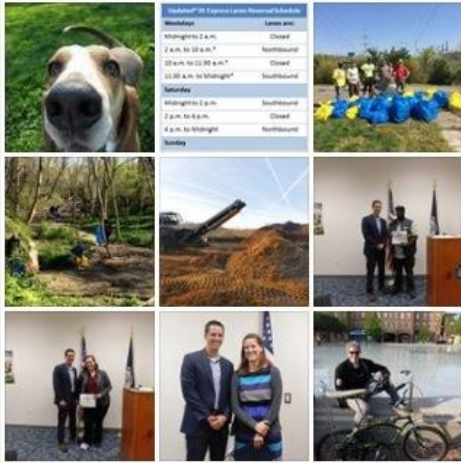
Like · Comment · Share



Like · Comment · Share



FYI: Join us April 30, 2016 for a day of family fun!



Transportation & Environmental Services, City of Alexandria, Virginia added 2 new photos.

May 31 at 1:25pm · 🌐

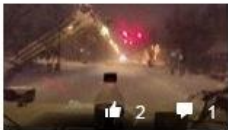
EVENT:: Did you know that June 4-12 has been designated by Maryland, Pennsylvania and Virginia as Chesapeake Bay Awareness Week (CBAW)? In conjunction with CBAW and the 28th annual Clean Bay Day the City is hosting a Bay Cleanup site at Four Mile Run Park on June 4 from 9-11 a.m.

Volunteers all over Virginia, from the Eastern Shore to the Shenandoah Valley, work by land and boat to give the Bay a massive spring cleaning every year. Enlisted men and women, scout groups, churches, small businesses, large corporations and thousands of individuals and families will turn out for this year's Clean the Bay Day. Since 1989, Clean the Bay Day has engaged over 140,000 volunteers, who have removed approximately 6.2 million pounds of debris from nearly 6,500 miles of shoreline in Virginia!

Interested in participating? Please contact Joni Calmbacher via email at joni.calmbacher@alexandriava.gov We can't wait to see you on June 4!



VIDEOS



VISITOR POSTS



Nina Schwartz

April 14 at 5:21pm · 🌐

I am writing to protest the recently instated 25 mph speed limit on ... See More

Like · Comment



City of Alexandria

Department of Transportation and Environmental Services
Stormwater Management Division
2900-B Business Center Dr.
Alexandria, VA 22314
www.alexandriava.gov

DATE

«FACNAME»

«PHYADDRESS»

«PHYCITY» «STATE» «F6»

«GreetingLine»

As part of the City of Alexandria's Stormwater Management Program and ongoing efforts to protect water resources, this letter is being sent to remind businesses and individuals that storm drain inlets connect directly to our local streams and the Potomac River, as part of the Chesapeake Bay Watershed.

Cooking oil and grease that is spilled or not properly placed in sealed drums can get washed into storm drains. The same goes for mop water that is dumped outside. These storm drains flow directly to our local waterways, where cooking oil, grease and mop water can harm the environment, wildlife and humans. That is why proper handling and disposal of these items is so important. To assist the City in its continuing effort to provide a safer and cleaner environment in which to live, work, and play, please take a few moments to read the enclosed brochure that provides ways that your operations can minimize discharge of harmful pollutants to our waterways and help improve the Chesapeake Bay.

Contact the Stormwater Management Division at 703-746-4014 or visit www.alexandriava.gov if you have any questions or would like to learn more about the City's Stormwater Management Program and our efforts to protect our shared water resources.



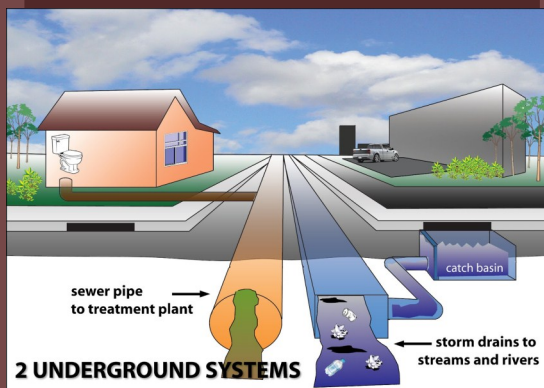
Your cooperation and responsible actions are greatly appreciated and will help to protect our streams, the Potomac River, and the Chesapeake Bay.

Best Regards,

A handwritten signature in black ink that reads "Wisdom Gbediame".

Wisdom Gbediame,
Water Quality Compliance Specialist
Transportation & Environmental Services
Stormwater Management Division





STORM SEWERS VS. SANITARY SEWERS

Sanitary sewers collect wastewater from indoor plumbing such as toilets, sinks, washing machines, and floor drains and transport it to a sewage treatment plant. The treatment plant removes pollutants from the wastewater before it is discharged into our local waterways.

Storm sewers consist of the drains and pipes found in streets and parking lots. They are intended to collect and transport runoff from rainfall. Storm drain systems do not remove pollutants from water before it is discharged into local water bodies. This means that everything that enters the drainage system also goes directly into our local streams, the Potomac River, and the Chesapeake Bay!

Illegal Dumping

Improper disposal or dumping of anything in a storm drain other than stormwater is illegal. City Code (Title 11, Ch. 13, Sec. 11-13-2) states that: It shall be unlawful for any person to dump any waste on any property, in any waters or in any sanitary sewer or stormwater system, except as authorized by law or by applicable permit.

To report illegal dumping or for questions about the stormwater program contact:



The City of Alexandria
Department of Transportation & Environmental
Services
Stormwater and Sanitary Infrastructure Division
2900-B Business Center Drive
Alexandria, VA 22314
Phone: 703-746-4014
www.alexandriava.gov/environment
24-Hour Nuisance Abatement Hotline:
703-836-0041

Publication date 6/18/2014

CITY OF ALEXANDRIA, VA

Best Management Practices for Stormwater Pollution Prevention



RESTAURANTS AND FOOD HANDLING BUSINESSES

BEST MANAGEMENT PRACTICES

Best management practices (BMPs) are practices and procedures that are used to prevent stormwater pollution and improve water quality.

Pollution Prevention BMPs

Grease and Oil

- Always use designated grease bins to dispose of used cooking oils and grease.
- Maintain grease traps and bins to prevent overflows and keep lids closed.

Wash Water

- Never empty a mop bucket outside or into the storm drain.
- Clean floor mats, garbage cans, and other large equipment at an indoor mop sink or other interior drain that is connected to the sanitary sewer.

Cleaning Spills and Drips

- Clean up nonhazardous spills quickly with a mop, rag, or absorbent material.
- Dispose of used absorbent material immediately.
- Store cleaning fluids indoors to prevent leaks and spills from reaching storm drains.

THE PROBLEM WITH POLLUTED RUNOFF

Everything washed or dumped into the storm drain flows untreated into our local streams, the Potomac River, and eventually the Chesapeake Bay.



Polluted water can kill fish and aquatic life, harm wildlife populations, kill vegetation, pollute drinking water supplies, and make recreational areas hazardous and unpleasant.

Garbage Disposal

- Avoid disposing of liquids in the garbage.
- Keep dumpster and garbage can lids closed to keep stormwater out.
- Check dumpsters and garbage cans regularly for leaks.
- Keep outdoor areas clean and clean up any spills.



Pressure Washing

- Water from pressure washing must be contained and discharged to the sanitary sewer.
- Equipment washing outside is prohibited.
- Businesses that use outside companies to do their pressure washing are still responsible if wastewater is disposed of into the storm drain.



City of Alexandria

Department of Transportation and Environmental Services
Stormwater Management Division
2900-B Business Center Dr.
Alexandria, VA 22314
www.alexandriava.gov

DATE

«F4»

«F6»

«F7», «F8» «F9»

«GreetingLine»

As part of the City of Alexandria's Stormwater Management Program and ongoing efforts to protect water resources, this letter is being sent to remind businesses and individuals that storm drain inlets connect directly to our local streams and the Potomac River, as part of the Chesapeake Bay Watershed.

Motor oil and other automotive fluids discharged from leaking vehicles may end up in storm drains during the next rainfall or snowmelt. The same goes for chemicals and detergents used in cleaning rugs and carpets that are dumped on the ground. Since our storm drains lead directly to local waterways, these chemicals can pollute our waterways and can be harmful to the environment, wildlife and humans. That is why proper handling and disposal of these items is so important. To assist the City in its continuing effort to provide a safer and cleaner environment in which to live, work and play, please take a few moments to read the enclosed brochure that provides ways that your operations can minimize discharge of motor oil and other potential harmful chemicals in storm drains and improve the water quality of the Chesapeake Bay.

Contact the Stormwater Management Division at 703-746-4014 or visit www.alexandriava.gov if you have any questions or would like to learn more about the City's Stormwater Management Program and our efforts to protect our shared water resources.



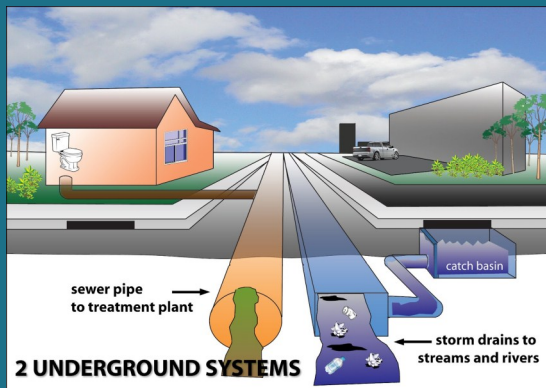
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Wisdom Gbediame, Water Quality Compliance Specialist
Transportation & Environmental Services
Stormwater Management Division





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Publication date 6/18/2014

CITY OF ALEXANDRIA, VA

Best Management Practices for Stormwater Pollution Prevention



AUTOMOTIVE GARAGES
AND SERVICE CENTERS

BEST MANAGEMENT PRACTICES

Best management practices (BMPs) are practices and procedures that are used to prevent stormwater pollution and improve water quality.

Pollution Prevention BMPs

- Never pour motor oil or any other fluids down storm drains.
- Never let oil or other waste fluids drain onto the ground.
- Promptly transfer waste fluids to proper containers and keep them closed.
- Conduct fluid changes and maintenance work indoors.
- Regularly check vehicles for leaks and place pans under leaking vehicles to collect fluids.
- Drain fluids promptly from junk vehicles.
- Use non-hazardous cleaners if possible.
- Minimize the number and amount of solvents used to reduce hazardous waste disposal.
- Wash water from car washing cannot enter storm drains.

THE PROBLEM WITH POLLUTED RUNOFF

Everything washed or dumped into the storm drain flows untreated into our local streams, the Potomac River, and eventually the Chesapeake Bay.



Polluted water can kill fish and aquatic life, harm wildlife populations, kill vegetation, pollute drinking water supplies, and make recreational areas hazardous and unpleasant.

Cleaning Spills

- Clean up nonhazardous spills quickly with a mop, rag, or absorbent material such as kitty litter.
- Never wash spilled material down a storm drain or onto the ground outdoors.
- Sweep up used absorbent material and dispose of it promptly. For hazardous materials, comply with all hazardous waste disposal regulations.
- Store cleaning fluids indoors and away from storm drains.





ECO-CITY ALEXANDRIA

Sara DeGroot, PE, CFM, Sr. Environmental Specialist,
City of Alexandria, VA

Outline

- Sustainability
- Eco-City Alexandria
- Stormwater
- Water pollution
- Improving water quality in Alexandria

What is sustainability?

- According to the Merriam-Webster Dictionary:
 - ▣ able to be used without being completely used up or destroyed
 - ▣ involving methods that do not completely use up or destroy natural resources
 - ▣ able to last or continue for a long time

Alexandria, VA Eco-City Charter

- Sustainability means meeting our community's present needs while preserving our historic character and ensuring the ability of future generations to meet their own needs. It involves balancing and integrating environmental, economic, health and social issues so as to maximize the quality of life for all of Alexandria's residents. Sustainability also requires us to consider the impacts of our decisions and actions beyond the City of Alexandria and seek the continuous evolution of policies and programs.

Eco-City Guiding Principles

- Transportation
- Building Green
- Air Quality
- Environment and Health
- Energy
- Land Use and Open Space
- Solid Waste
- Global Climate Change and Emerging Threats
- Water Resources
- Environmental Action Plan Implementation by Sustainability Sector



Public Education and Outreach

The City strives to educate and inform the public on the importance of our local waterways, watersheds, and stormwater related issues.

Signs have been placed throughout the City along roadways at major stream crossings to inform the public on the names of local streams and their associated watershed. A bilingual “no dumping” message is included on [Storm Drain Markers](#) placed on inlets and storm drains throughout the City to prevent the dumping of trash, oil, dog waste, etc. into the drain.



City staff is available for presentations and other educational outreach opportunities for community groups, school age children, and adults. If you are interested in stormwater education and outreach opportunities call the Stormwater Management Division at 703.746.4014.

Public Involvement and Participation

You can make a difference in the health of local streams and waterways by reducing pollution, getting involved in local events, and reporting pollution problems or concerns. Stormwater flows into our streams with little or no treatment to remove pollutants. Therefore, pollution prevention is critical to the health of our streams. There are [simple steps you can take](#) around your home or business that will have a positive impact on the health of the waterways in Alexandria.

Your involvement is the key to a successful stormwater management program. There are many ways citizens can get involved:

- Dispose of waste properly at the [Household Hazardous Waste & Electronics Recycling Center](#)
- Participate in (or organize your own!) stream cleanups (sign up for [Environmental News](#) for the latest events)
- Participate in [Earth Day](#)
- Attend [Environmental Policy Commission Meetings](#)
- Participate in the [Yard Waste Recycling Program](#)
 - Curbside Lead Collection
 - Composting
 - Grasscycling
 - Christmas Tree Collection
 - Spring Leaf & Wood Mulch Program
- Visit the [Eco-City Alexandria webpage](#) for upcoming events

If you have questions or comments, please contact the Stormwater Management Division at 703-746-4014.

STORMWATER MANAGEMENT FACILITY

This Best Management Practice (BMP) facility helps to maintain the health of our streams, the Potomac River, and the Chesapeake Bay. It also helps to prevent flooding and stream erosion, promotes improved water quality, and protects aquatic life.

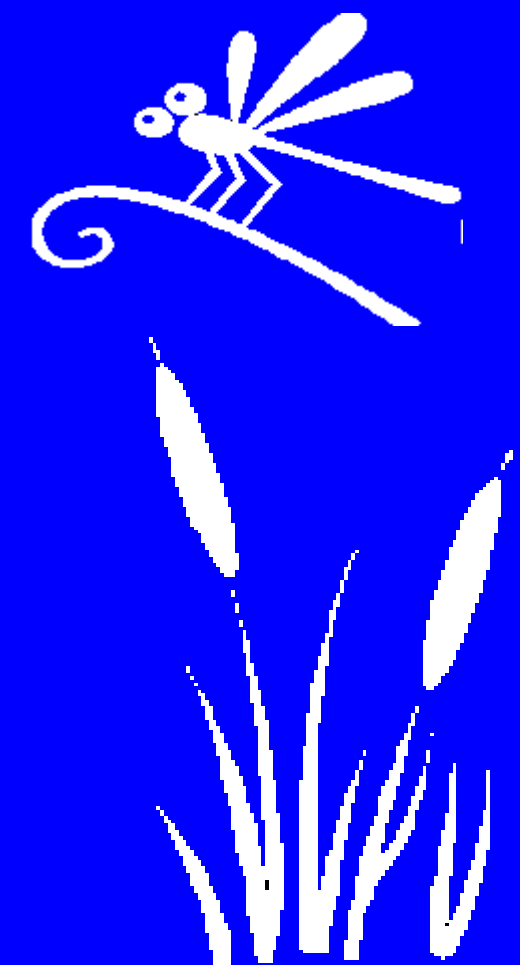
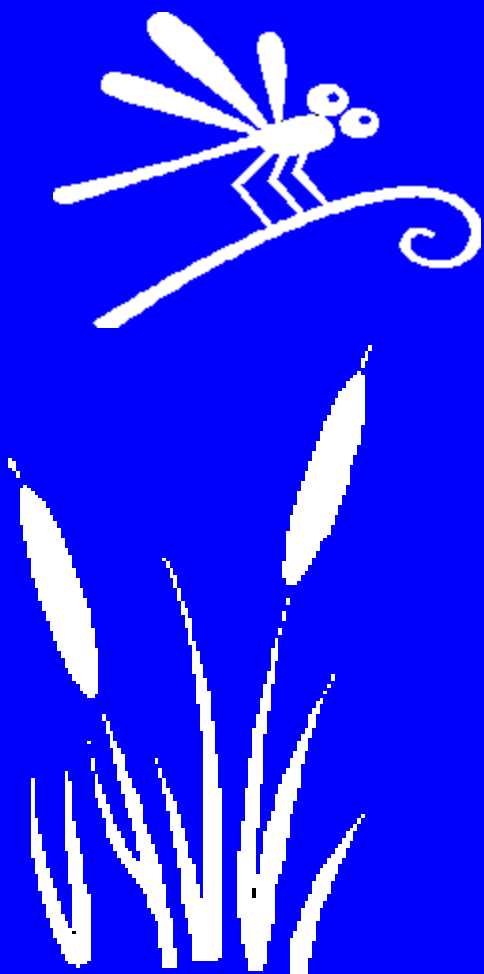
**You are in the
Potomac River
Watershed**



Report Problems to: (703) 746-4014

CITY OF ALEXANDRIA

Department of Transportation & Environmental Services



FINAL SITE PLAN
THE MIDDLETON
NORTH ROYAL STREET AND PRINCESS STREET
CITY OF ALEXANDRIA, VIRGINIA

AREA TABULATIONS

TOTAL SITE AREA = 0.1782 AC 7,762 SF
TOTAL AREA OF TAX PARCELS = 0.1782 AC 7,762 SF
TOTAL EXISTING IMPERVIOUS AREA = 0.1709 AC 7,446 SF
TOTAL PROPOSED IMPERVIOUS AREA = 0.1147 AC 4,996 SF
TOTAL DISTURBED AREA = 0.3104 AC 13,520 SF

BUILDING CODE AND FIRE FLOW INFORMATION

BUILDING INFORMATION:	
USE:	RESIDENTIAL
USE GROUP:	R-3 RESIDENTIAL
TYPE OF CONSTRUCTION:	VB
NUMBER OF STORIES:	3
FLOOR AREA (GROSS):	16,603 SQ.FT.
FLOOR AREA (NET):	10,956 SQ.FT.
BUILDING FOOT PRINT AREA:	4,480 SQ.FT.
BUILDING HEIGHT:	36.5' (LOT 601), 35.8' (LOT 602), 36.4' (LOT 603), 33.5' (LOT 604)
FIRE SUPPRESSION/DETECTION:	SMOKE DETECTORS
NEEDED FIRE FLOW:	3,000 GPM

FIRE HYDRANT FLOW INFORMATION:

HYDRANT NUMBER: 1258
STATIC = 58 PSI
RESIDUAL = 49 PSI
FLOW = 987 GPM
Q₂₀ = 2,148 GPM

ENVIRONMENTAL SITE ASSESSMENT

- THERE ARE NO RESOURCE PROTECTION AREAS (RPA'S), TIDAL WETLANDS, SHORES, TRIBUTARY STREAMS, FLOOD PLAINS, OR BUFFER AREAS FOR SHORES, WETLANDS, CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS OR HIGHLY ERODIBLE/PERMEABLE SOILS LOCATED ON THIS SITE. THERE ARE NO WETLAND PERMITS REQUIRED FOR THE DEVELOPMENT ON THIS PROPERTY.
- THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, DIVISION OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASE TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
- ALL WELLS TO BE DEMOLISHED ON THIS PROJECT, INCLUDING MONITORING WELLS, MUST BE CLOSED IN ACCORDANCE WITH STATE WELL REGULATION. CONTACT THE ALEXANDRIA HEALTH DEPARTMENT AT 703-746-4996.
- SOME LOW LEVEL METAL IMPACTED SOIL IS PRESENT ON SITE AND MUST BE HANDLED PROPERLY. SEE SHEET 10 FOR A SUMMARY OF THE FINDINGS. A SUBSURFACE INVESTIGATION WAS PERFORMED BY TOTAL ENVIRONMENTAL CONCEPTS INC. ON SEPTEMBER 20TH, 2013. THIS INVESTIGATION DID NOT FIND LEVELS OF HISTORICAL USE CONTAMINANTS (DRY CLEANING FLUID OR PETROLEUM PRODUCTS) THAT WOULD BE REQUIRE MITIGATION MEASURES. SEE ENVIRONMENTAL HEALTH AND SAFETY NOTE ON SHEET 9

ENVIRONMENTAL PERMITS NOTE:

ALL REQUIRED PERMITS FROM VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, ENVIRONMENTAL PROTECTION AGENCY, ARMY CORPS OF ENGINEERS, VIRGINIA MARINE RESOURCES MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN.
A VSPM PERMIT IS REQUIRED FOR THIS PROJECT BECAUSE THE PROPOSED CONSTRUCTION ACTIVITIES DISTURB AN AREA GREATER THAN 2,500 SQ.FT. IF REQUIRED, AS VPDES PERMIT WILL BE OBTAINED AND A COPY WILL BE FILED WITH THE CITY OF ALEXANDRIA.

ARCHAEOLOGY NOTES

A PRELIMINARY ARCHAEOLOGICAL ASSESSMENT HAS BEEN CONDUCTED BY THE ALEXANDRIA ARCHAEOLOGY OFFICE OF HISTORIC ALEXANDRIA. IT WAS DETERMINED THAT THE SITE HAS THE POTENTIAL TO CONTAIN ARCHAEOLOGICALLY SIGNIFICANT FINDINGS. AN ARCHAEOLOGICAL CONSULTANT SHALL BE HIRED TO COMPLETE A DOCUMENTARY STUDY AND AN ARCHAEOLOGICAL EVALUATION TO BE SUBMITTED TO THE CITY OF ALEXANDRIA PRIOR TO APPLICATION FOR CERTIFICATE OF OCCUPANCY.

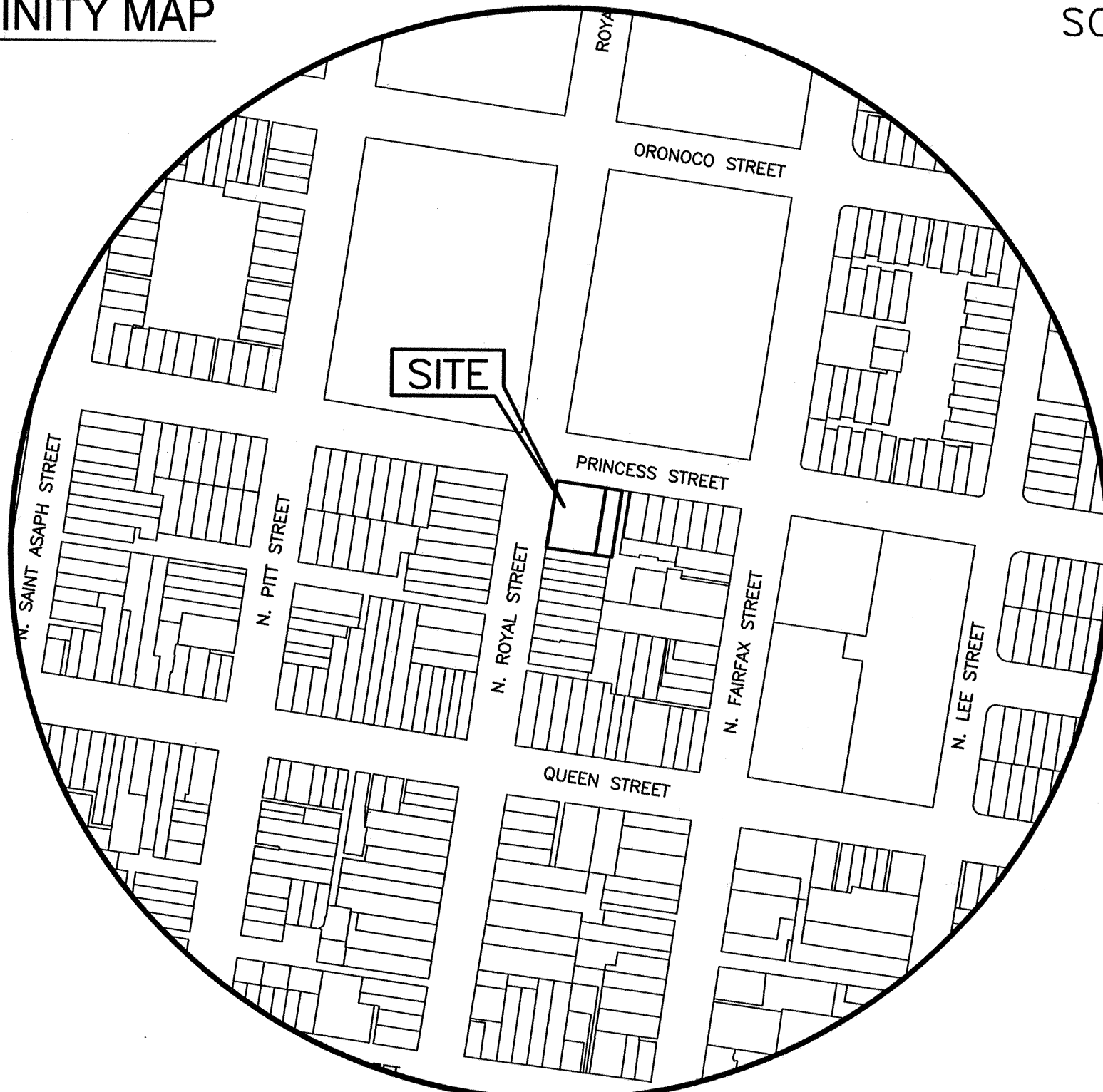
CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY IF ANY BURIED STRUCTURAL REMAINS (WALLS WELL, PRIMES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

THE APPLICANT SHALL NOT ALLOW ANY METAL DETECTION AND/OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY. FAILURE TO COMPLY SHALL RESULT IN PROJECT DELAYS. THE LANGUAGE NOTED ABOVE SHALL BE INCLUDED ON ALL FINAL SITE PLAN SHEETS INVOLVING ANY GROUND DISTURBING ACTIVITIES.

GENERAL NOTES

- PRIOR TO THE APPLICATION FOR NEW CERTIFICATE OF OCCUPANCY, THE APPLICANT SHALL SUBMIT A BUILDING PERMIT FOR A CHANGE OF USE. DRAWINGS PREPARED BY A LICENSED ARCHITECT OR PROFESSIONAL ENGINEER SHALL ACCOMPANY THE PERMIT APPLICATION. THE PLANS SHALL SHOW PROPOSED CONDITIONS AND PROVIDE DATA BY THE DESIGN PROFESSIONAL WHICH DETAILS HOW THE PROPOSED USE WILL COMPLY WITH THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE FOR THE NEW USE IN THE AREA OF STRUCTURAL STRENGTH, MEANS OF EGRESS, PASSIVE AND ACTIVE FIRE PROTECTION, HEATING AND VENTILATING SYSTEMS, HANDICAPPED ACCESSIBILITY AND PLUMBING FACILITIES.
- NEW CONSTRUCTION MUST COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).
- ANY PROPOSED FUTURE ALTERATIONS TO THE EXISTING STRUCTURE MUST COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).
- BEFORE A BUILDING PERMIT CAN BE ISSUED ON ANY PROPOSED FUTURE ALTERATIONS, A CERTIFICATION IS REQUIRED FROM THE OWNER OR OWNER'S AGENT THAT THE BUILDING HAS BEEN INSPECTED BY A LICENSED ASBESTOS INSPECTOR FOR THE PRESENCE OF ASBESTOS.
- A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF.
- REQUIRED EXITS, PARKING, AND ACCESSIBILITY WITHIN THE BUILDING FOR PERSONS WITH DISABILITIES MUST COMPLY WITH USBC CHAPTER 11.
- IF APPLICABLE, ENCLOSED PARKING GARAGES MUST BE VENTILATED IN ACCORDANCE WITH USBC 406.4.2. THE REQUIRED MECHANICAL VENTILATION RATE FOR AIR IS 0.75 CFM PER SQUARE FOOT OF THE FLOOR AREA (USBC 2801.1). IN AREAS WHERE MOTOR VEHICLES OPERATE FOR A PERIOD OF TIME EXCEEDING 10 SECONDS, THE VENTILATION RETURN AIR MUST BE EXHAUSTED. AN EXHAUST SYSTEM MUST BE PROVIDED TO CONNECT DIRECTLY TO THE MOTOR VEHICLE EXHAUST (USBC 2801.1).
- ELECTRICAL WIRING METHODS AND OTHER ELECTRICAL REQUIREMENTS MUST COMPLY WITH NFPA 70, 2008.
- IF APPLICABLE, THE PUBLIC PARKING GARAGE FLOOR MUST COMPLY WITH USBC 406.2.6 AND DRAIN THROUGH OIL SEPARATORS OR TRAPS TO AVOID ACCUMULATION OF EXPLOSIVE VAPORS IN BUILDING DRAINS OR SEWERS AS PROVIDED FOR IN THE PLUMBING CODE (USBC 2901). THIS PARKING GARAGE IS CLASSIFIED AS AN S-2, GROUP 2, PUBLIC GARAGE.
- THIS PROJECT IS NOT LOCATED IN A COMBINED SEWER AREA.
- THIS SITE DOES NOT CONTAIN ANY AREAS PREVIOUSLY MAPPED AS MARINE CLAYS.

VICINITY MAP



SCALE: 1"=200'

TAX PARCEL NUMBERS: 065.03-02-01
065.03-02-02

PROJECT DESCRIPTION NARRATIVE

THE APPLICANT IS PROPOSING REDEVELOPMENT OF THE SUBJECT SITE WHICH IS CURRENTLY OCCUPIED BY A CONVENIENCE STORE ON LOT 501 AND A LAUNDROMAT ON LOT 502. THE PARCELS WILL BE CONSOLIDATED AND THEN RESUBDIVIDED INTO FOUR (4) TOWNHOUSE LOTS. EACH NEW LOT WILL BE OCCUPIED BY A SINGLE TOWNHOUSE. EACH TOWNHOUSE WILL PROVIDE TWO (2) ON-SITE PARKING SPACES WHICH WILL BE ACCESSED FROM THE PRIVATE ALLEY LOCATED OFF OF PRINCESS STREET.

PROPOSED USE NOTE:

HOURS OF OPERATION: TYPICAL FOR A RESIDENTIAL USE.
NUMBER OF DWELLING UNITS ON-SITE: 4
DESCRIPTION OF POTENTIAL USES: THIS SITE IS WILL BE DIVIDED INTO FOUR (4) TOWNHOUSE LOTS. A TOWNHOUSE WILL BE CONSTRUCTED ON EACH OF THE NEW LOTS.

MODIFICATIONS AND WAIVERS NOTE:

MODIFICATIONS WERE APPROVED FOR OPEN SPACE, SETBACKS, VISION CLEARANCE, AND AISLE WIDTH. THIS PLAN PROPOSES A VEHICLE BACKUP AISLE WIDTH OF 12' INSTEAD OF THE REQUIRED 22'. A MODIFICATION OF 10' HAS BEEN APPROVED. ADDITIONALLY, A MODIFICATION HAS BEEN APPROVED TO REDUCE THE OPEN SPACE REQUIREMENTS PER CONDITION 38A. A YARD REDUCTION TO 0.3' AND 0.4' FOR LOTS 601, 602, AND 603 HAS BEEN APPROVED AS WELL AS A REDUCTION OF THE FRONT YARD TO 4.0' AND 3.1' FOR THE SIDE YARD FOR LOT 604. A MODIFICATION TO ALLOW ROOFTOP HVAC SCREENING HAS BEEN APPROVED BY THE OLD AND HISTORIC DISTRICT BOARD OF ARCHITECTURAL REVIEW.

OWNER/DEVELOPER

- OWNER/DEVELOPER:
ROYAL MARKETPLACE, LLC
2417-C MT. VERNON AVENUE
ALEXANDRIA, VA 22314
CONTACT: SCOTT MITCHELL
- PLAN PREPARED BY:
R.C. FIELDS & ASSOCIATES, INC.
730 S. WASHINGTON STREET
ALEXANDRIA, VA 22314
(703) 549-6422
CONTACT: BRIAN DOFFLEMYER
- ARCHITECT:
KULINSKI GROUP ARCHITECTS P.C.
104 N. WEST STREET
ALEXANDRIA, VA 22314
(703) 836-7243
CONTACT: STEVE KULINSKI
- ATTORNEY:
HART, CALLEY, GIBBS & KARP, P.C.
307 N. WASHINGTON STREET
ALEXANDRIA, VA 22314
(703) 836-5757
CONTACT: MARY CATHERINE GIBBS

ZONING TABULATIONS

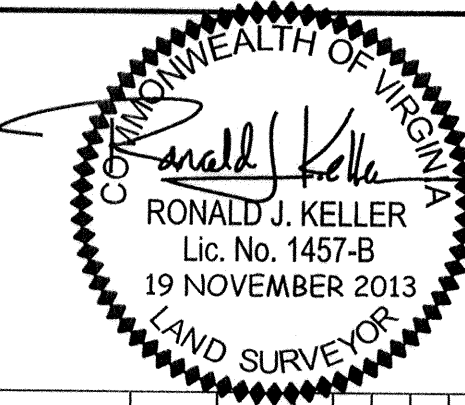
- ZONE OF SITE: RM
- USE: EXISTING COMMERCIAL PROPOSED RESIDENTIAL
- LOT AREA: 601 = 2,048 SF 602 = 1,865 SF 603 = 1,865 SF 604 = 1,984 SF TOTAL = 7,762 SF
MINIMUM LOT AREA: 1,452 SF
- NUMBER OF DWELLING UNITS: 4
- UNITS PER ACRE: 22.4 (30 UNITS/AC. ALLOWED)
- GROSS FLOOR AREA: 16,603 SQ.FT.
601 = 4,307 SF
602 = 4,189 SF
603 = 4,189 SF
604 = 3,918 SF
TOTAL = 16,603 SF
- NET FLOOR AREA: 10,956 SQ.FT.
601 = 2,816 SF
602 = 2,729 SF
603 = 2,729 SF
604 = 2,682 SF
TOTAL = 10,956 SF
- FLOOR AREA RATIO: PERMITTED: 1.50 OR 11,643 SF
PROPOSED: 601 = 1.37 602 = 1.48 603 = 1.48 604 = 1.35
- OPEN SPACE:
REQUIRED (35% OF LOT AREA)
601 = 0.35 x 2,048 = 717 SF
602 = 0.35 x 1,865 = 653 SF
603 = 0.35 x 1,865 = 653 SF
604 = 0.35 x 1,984 = 694 SF
PROPOSED
LOT APPROVED PROPOSED REDUCTION***
601 739** 704 4.8%
602 661** 631 4.5%
603 661** 631 4.5%
604 780** 751 3.8%
*SEE SHEET 21 FOR OPEN SPACE DIAGRAM.
**THIS NUMBER INCLUDES NON-CONFORMING OPEN SPACE THAT WAS APPROVED BY PLANNING COMMISSION
***ALLOWABLE REDUCTION IS 5% AS APPROVED WITH CONDITION 38A
- AVERAGE FINISHED GRADE: 16.1 OVERALL (LOT 601=15.0, LOT 602=16.4, LOT 603=17.1, LOT 604=17.5)
- HEIGHT: ALLOWED: 45' - ROOF RIDGES ARE PARALLEL WITH ROYAL STREET AND THE SLOPES ARE COMPATIBLE WITH THE NEIGHBORING BUILDINGS
PROPOSED HEIGHTS:
601 = 36.5'
602 = 35.8'
603 = 36.4'
604 = 33.5'
- YARDS: REQUIRED EX. PREVAILING (8.9') PROVIDED 0.3'-4.0'
FRONT 5' (FROM END UNIT, LOT 604) 3.1'
SIDE 1.2 RATIO OF HEIGHT (18.3') 31.9'
REAR
- FRONTAGE: REQUIRED 18' PER LOT PROPOSED 19.7'-23.0'
- PARKING REQUIRED: 2.0 SPACES PER DWELLING UNIT
TOTAL REQUIRED PARKING SPACES = 8 SPACES
TOTAL PROPOSED PARKING SPACES = 8 SPACES (STANDARD 9' x 18.5')
NOTE: NO HANDICAP ACCESSIBLE SPACES ARE REQUIRED.
- LOADING SPACES: REQUIRED = N/A
- TRIP GENERATION: EXISTING 647 PROPOSED 48 (PER ITE STANDARDS)

	NEW	UPGRADED
CROSSWALKS (NUMBER)	N/A	N/A
STANDARD	N/A	N/A
HIGH VISIBILITY	N/A	N/A
CURB RAMPS	N/A	1
SIDEWALKS (LF)	N/A	183
BICYCLE PARKING (NUMBER SPACES)	N/A	N/A
PUBLIC/VISITOR	N/A	N/A
PRIVATE/GARAGE	N/A	N/A
BICYCLE PATHS (LF)	N/A	N/A
PEDESTRIAN SIGNALS	N/A	N/A

COVER SHEET	SHEET 1	THIRD FLOOR PLANS	SHEET A4
CONDITIONS	SHEET 2	ROOF PLANS/AC UNIT LOCATIONS	SHEET A5
CONDITIONS	SHEET 2A	ROYAL STREET ELEVATIONS	SHEET A6-A
CONTEXTUAL PLAN	SHEET 3	ROYAL STREET ELEVATIONS	SHEET A6
NOTES	SHEET 4	PRINCESS STREET ELEVATION	SHEET A7-A
EXISTING CONDITIONS PLAN	SHEET 5	PRINCESS STREET ELEVATION	SHEET A7
FINAL SITE PLAN	SHEET 6	EAST/SOUTH ELEVATIONS	SHEET A8
SITE DIMENSIONS PLAN	SHEET 7	SOUTH ELEVATION	SHEET A9
DETAILED SITE GRADING	SHEET 8	NORTH ELEVATION	SHEET A10
EROSION AND SEDIMENT CONTROL NARRATIVES	SHEET 9	ROYAL/PRINCESS STREET ELEVATION	SHEET A11
E & S DETAILS/CONTAMINATED LAND REPORT	SHEET 10	FLOOR AREA RATIO DIAGRAMS	SHEET A12
EROSION AND SEDIMENT CONTROL PHASE I-DEMOLITION	SHEET 11	FLOOR AREA RATIO CALCULATIONS	SHEET A13
EXISTING DRAINAGE DIVIDES	SHEET 12	OVERALL SITE PLAN	SHEET L1.01
EROSION AND SEDIMENT CONTROL PHASE II	SHEET 13	TREE WELL PLAN	SHEET L1.02
PROPOSED ON-SITE DRAINAGE DIVIDES	SHEET 14	LIGHTING PLAN	SHEET L1.03
STORM SEWER PLAN AND PROFILE	SHEET 15	PLANTING SCHEDULE AND NOTES	SHEET L2.01
SWM/BMP MAP AND COMPUTATIONS	SHEET 16	STANDARD LANDSCAPE DETAILS	SHEET L2.02
BMP NOTES AND DETAILS	SHEET 17	LANDSCAPE DETAILS	SHEET L2.03
OUTFALL ANALYSIS	SHEET 18		
SANITARY SEWER PLAN AND PROFILE	SHEET 19		
WATER PLAN AND PROFILE	SHEET 20		
OPEN SPACE AND TURNING MOVEMENTS	SHEET 21		
SITE DETAILS	SHEET 22		
SIGHT DISTANCE PLAN	SHEET 23		
MAINTENANCE OF TRAFFIC PLAN	SHEET 24		
BASEMENT PLANS	SHEET A1		
FIRST FLOOR PLANS	SHEET A2		
SECOND FLOOR PLANS	SHEET A3		

ESI
PEER REVIEW

RC FIELDS & ASSOCIATES, INC.
ENGINEERING • PLANNING
LAND SURVEYING
730 S. Washington Street
Alexandria, Virginia 22314
(703) 549-6422



PROJ. MANAGER: BRIAN DOFFLEMYER
EMAIL: bdofflemyer@rcfields.com
DATE: JULY 2013
SCALE: AS NOTED
REV: JCB

REVISION APPROVED BY

NO.	DESCRIPTION	DATE	REV.	BY	APPROVED
1	FINAL COMMENTS	9/24/13			
2	FINAL COMMENTS	10/28/13			
3	MITAR	11/19/13			

FINAL SITE PLAN

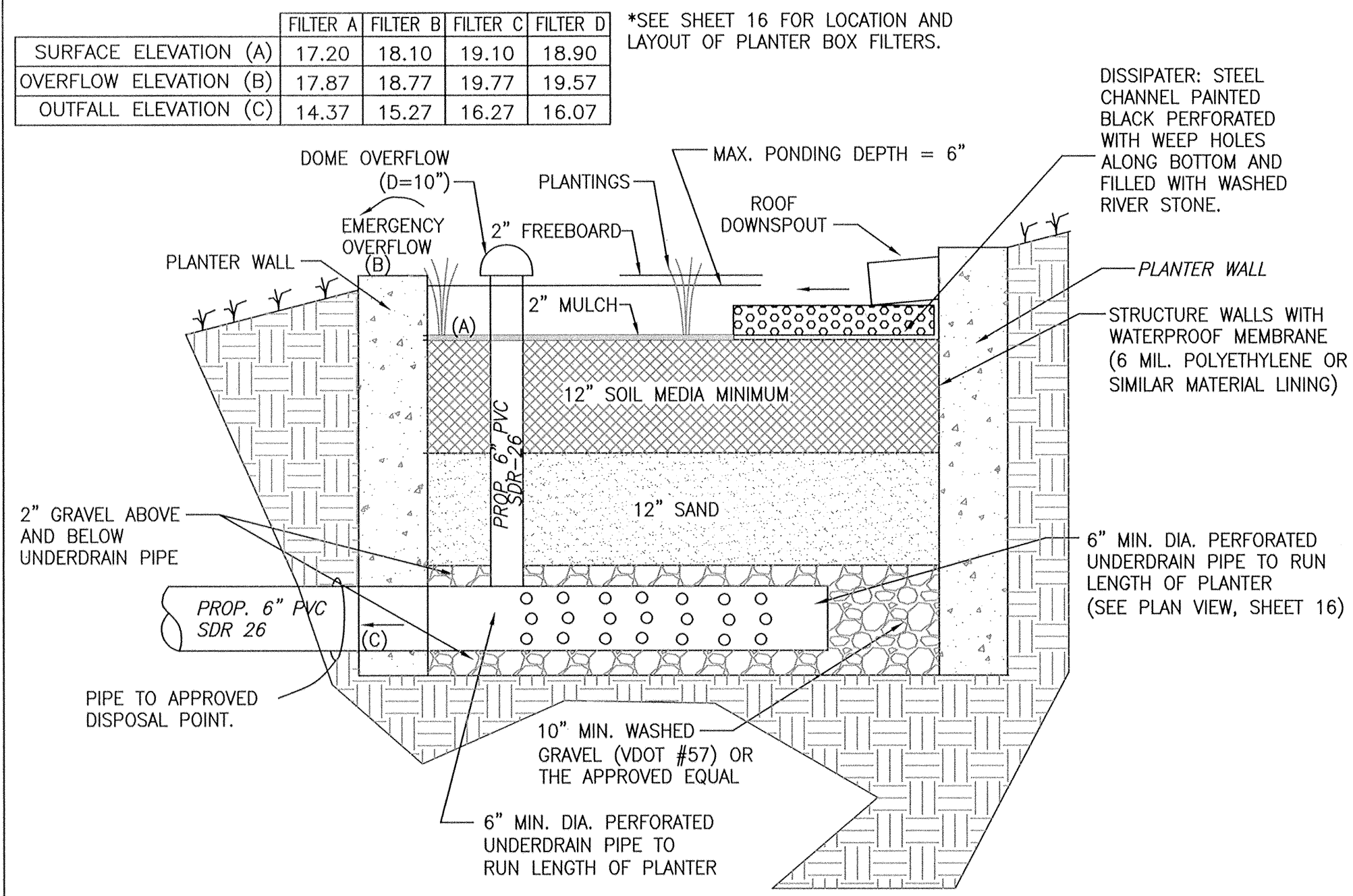
THE MIDDLETON

NORTH ROYAL STREET AND PRINCESS STREET
CITY OF ALEXANDRIA, VIRGINIA

COVER SHEET

SHEET NAME:

APPROVED
SPECIAL USE PERMIT NO. 2012-0029
DEPARTMENT OF PLANNING & ZONING
DIRECTOR: [Signature] DATE: 1/9/14
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. [Signature] DATE: 1/6/14
CHAIRMAN, PLANNING COMMISSION: [Signature] DATE: 1/9/14
DATE RECORDED: _____
INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____



PLANTER BOX FILTERS MAY BE ABOVE OR BELOW EXISTING OR PROPOSED GRADE PROVIDED MINIMUM COVER OVER OUTLET PIPE IS MET; 6" UNDER GRASS, 24" UNDER CONCRETE OR ASPHALT

PLANTER BOX FILTER DETAIL
SCALE: NOT TO SCALE

PLANTER BOX FILTER SEQUENCE OF CONSTRUCTION:

- CONSTRUCTION OF THE PLANTER AREAS MAY ONLY COMMENCE ONCE UPSTREAM AREAS ARE COMPLETELY STABILIZED. CONSULT CITY INSPECTOR BEFORE BEGINNING CONSTRUCTION. THE SITE SHOULD BE STABILIZED TO THE POINT THAT EROSION AND SEDIMENT CONTROLS ARE NO LONGER NECESSARY.
- EXCAVATE THE PLANTER BOX AREA TO THE PROPOSED DEPTH. IT IS CRITICAL TO KEEP SEDIMENT OUT OF THE EXCAVATION.
- INSTALL THE GRAVEL TO THE SPECIFIED DEPTH, DO NOT COMPACT THE GRAVEL.
- FILL THE PLANTER AREA WITH SOIL MEDIA TO THE DEPTH SHOWN ON THE DETAIL AND SPECIFICATIONS. VERIFY THE SURFACE ELEVATION OF THE PLANTING BED TO ENSURE THE ADEQUATE PONDING OF WATER. THE ELEVATIONS OF THE BED ARE CRITICAL IN THE FUNCTIONING OF THE SYSTEM. THE SOIL SHALL BE PLACED IN LIFTS LESS THAN 6 INCHES AND LIGHTLY COMPACTED BY TAMPING BY HAND (MINIMAL COMPACTION REQUIRED).
- PLANT VEGETATION SPECIFIED IN THE PLANTING PLAN AND SCHEDULE.
- CONSTRUCTION OF THE PLANTER BOX FILTER SHOULD BE PERFORMED IN A TIMELY MANNER, PREFERABLY DURING A PERIOD OF EXPECTED DRY WEATHER. THE FACILITY SHOULD BE CONSTRUCTED AND FULLY STABILIZED AND OPERATIONAL IN A MATTER OF A FEW DAYS.

PLANTER BOX FILTER MAINTENANCE:

THE PROPOSED PLANTER BOX FILTER SHALL BE CHECKED FOR CORRECT OPERATION AND FLOW OF RUNOFF THROUGH THE FACILITY ONCE A MONTH FOR THE FIRST YEAR AND THEN BIANNUALLY THEREAFTER. SUPPLEMENTAL INSPECTIONS AFTER LARGE RAIN EVENTS SHALL BE MADE BY THE PROPERTY OWNER. THE FACILITY SHOULD BE CHECKED TO ENSURE THAT DRAWDOWN TIME DOES NOT EXCEED 24 HOURS, THAT THE OUTFALL PIPES AND PERFORATED COLLECTOR PIPES ARE NOT CLOGGED, THAT THE PLANTINGS ARE VIABLE AND THAT THE SPLASH BLOCK IS IN PLACE AND PREVENTING GOUGING OF THE SOIL MEDIA. ANY FOUND PROBLEMS SHALL BE CORRECTED IMMEDIATELY.

THE FACILITY SHALL BE INSPECTED 12-24 HOURS AFTER A SIGNIFICANT RAINFALL (0.5-1.0 INCH) OR ARTIFICIAL FLOODING TO DETERMINE THAT THE FACILITY IS DRAINING PROPERLY.

MAINTENANCE ACTIVITIES ENTAIL ROUTINE VISUAL INSPECTIONS OF THE PLANTER BOX FILTER STRUCTURE AND THE UNDERDRAIN. SOILS ALSO NEED TO BE INSPECTED TO EVALUATE ROOT GROWTH AND CHANNEL FORMATION WITHIN THE SOIL MATRIX. ANY DEBRIS THAT MAY HAVE COLLECTED IN THE FACILITY SHALL BE REMOVED. DURING DROUGHT CONDITIONS, IT MAY BE NECESSARY TO WATER THE PLANTS AS WOULD BE THE CASE WITH ANY LANDSCAPED AREA. MULCH SHALL BE REPLACED AS DEEMED NECESSARY, BUT NOT LESS THAN ONCE EACH YEAR.

TO ENSURE PROPER PERFORMANCE, VISUALLY INSPECT THAT THE STORMWATER INFILTRATES PROPERLY INTO THE SOIL AND THAT THERE IS DISCHARGE FROM THE UNDERDRAIN DURING RUNOFF EVENTS. WATER PONDING IN THE FACILITY FOR MORE THAN 24 HOURS MAY INDICATE OPERATIONAL PROBLEMS. IF EXCESSIVE WATER PONDING IS OBSERVED, CORRECTIVE MEASURES INCLUDE INSPECTION FOR SOIL COMPACTION AND OF UNDERDRAIN CLOGGING. THE SPECIFIED GROWTH MEDIA MAY NEED TO BE TURNED OR TILLED TO IMPROVE INFILTRATION. IF THESE EFFORTS ARE UNSUCCESSFUL, THE SOIL MEDIA AND UNDERDRAIN MAY NEED TO BE REMOVED AND REPLACED

PLANTER BOX SIZING

WQVD = A X 1,815
A = IMPERVIOUS AREA TO PLANTER BOX, acres

$$SA = \frac{(WQVD)(d)}{\{k[(hf+d)1]\}}$$

SA = SURFACE AREA OF PLANTER BOX REQUIRED
d = DEPTH OF FILTER MEDIA, ft (2.0')
k = INFILTRATION RATE, ft/day (2.17)
hf = AVERAGE PONDING DEPTH, ft (0.25)
t = DRAWDOWN TIME, days (1)

PLANTER BOX A
WQVD = 0.0258 X 1,815 = 46.8 CF
SA = $\frac{(46.8)(2.0)}{\{2.17[(0.25+2.0)1]\}}$ = 19.2 SF REQUIRED
SURFACE AREA PROVIDED = 22.0 SF

PLANTER BOX B
WQVD = 0.0233 X 1,815 = 40.5 CF
SA = $\frac{(40.5)(2.0)}{\{2.17[(0.25+2.0)1]\}}$ = 16.5 SF REQUIRED
SURFACE AREA PROVIDED = 22.0 SF

PLANTER BOX C
WQVD = 0.0233 X 1,815 = 40.5 CF
SA = $\frac{(40.5)(2.0)}{\{2.17[(0.25+2.0)1]\}}$ = 16.5 SF REQUIRED
SURFACE AREA PROVIDED = 22.0 SF

PLANTER BOX D
WQVD = 0.0179 X 1,815 = 32.5 CF
SA = $\frac{(32.5)(2.0)}{\{2.17[(0.25+2.0)1]\}}$ = 13.3 SF REQUIRED
SURFACE AREA PROVIDED = 19.5 SF

SOIL MEDIA NOTE:

THE SOIL MEDIA SHALL BE COMPOSED OF A MIXTURE OF 60-75% WASHED SAND, 5-15% ORGANIC MATTER (LEAF COMPOST) AND 10-35% TOPSOIL. THE TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND, SILT LOAM OR LOAM PER USDA TEXTURAL CLASSIFICATION. THE TEXTURAL CLASS OF THE TOPSOIL SHALL BE VERIFIED BY A LABORATORY ANALYSIS (IF REQUIRED). TOPSOIL SHALL BE OF UNIFORM COMPOSITION, CONTAINING NO MORE THAN 8% CLAY, FREE OF STONES, STUMPS, BRUSH, ROOTS, OR SIMILAR OBJECTS LARGER THAN 2 INCHES. TOPSOIL SHALL BE FREE OF DELETERIOUS MATERIALS AND NOXIOUS WEEDS.

THE FINAL SOIL MIXTURE SHALL NOT CONTAIN ANY MATERIAL OR SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH, OR A HINDRANCE TO PLANT GROWTH OR MAINTENANCE. THE FINAL SOIL MEDIA MIXTURE SHALL HAVE A PH RANGE OF 5.5-6.5, A TOTAL ORGANIC MATTER BY LOSS ON IGNITION (ASTM F1647, METHOD A) OF GREATER THAN 1.5% AND SOLUBLE SALTS SHALL BE LESS THAN OR EQUAL TO 500 PPM.

ASTM C33 CONCRETE SAND SHALL BE USED AS THE MATERIAL FOR THE SAND LAYER.

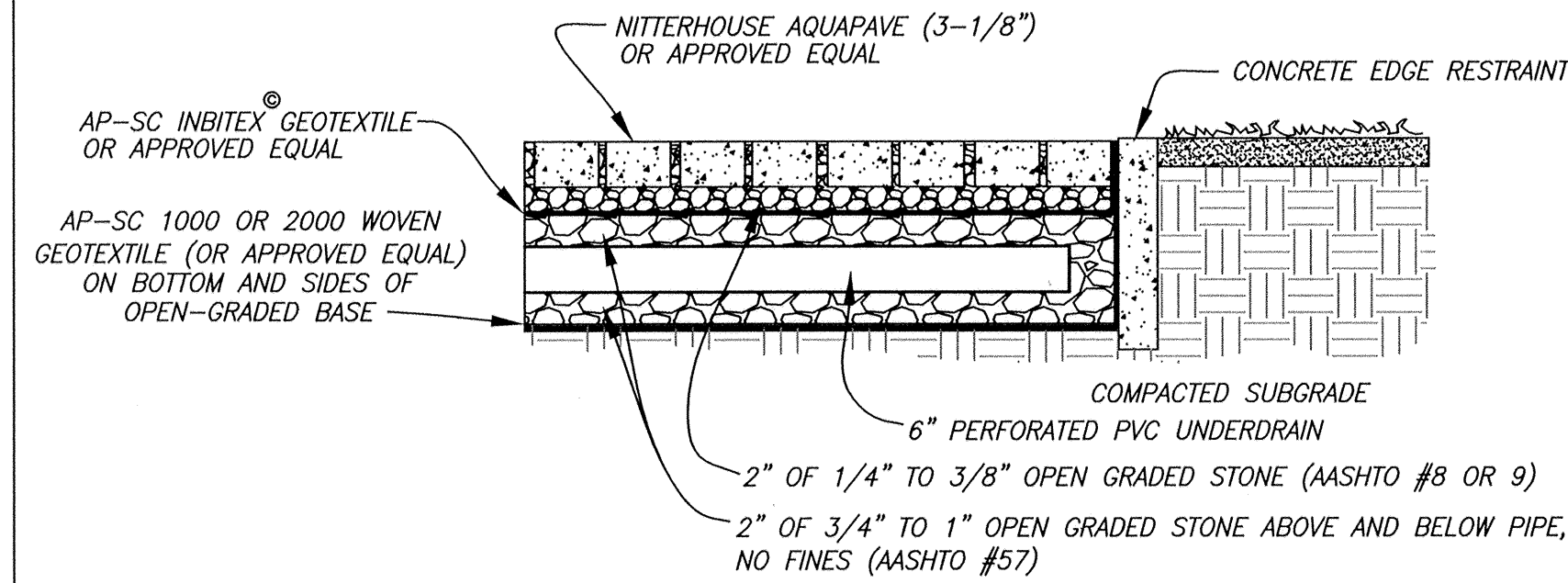
MULCH NOTE:

A MULCH LAYER SHALL BE PROVIDED ON TOP OF THE PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCT. APPROVED MULCH PRODUCTS ALL MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIAL INCLUDING PLANT MATERIAL.

PLANTER BOX FILTER PLANT SPECIFICATIONS:

- ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE AND UNTIL PLANTED.
- WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
- THE PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/8" OF THE BALL TO BE ABOVE THE EXISTING GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND. THE APPROPRIATE AMOUNT OF FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE PIT.
- THE PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY IT'S BALL (NEVER LIFT BY BRANCHES OR TRUNK).
- SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THAT 1/8" OF THE DIAMETER OF THE ROOT BALL IS ABOVE THE FINAL GRADE.
- BACKFILL PLANTING PIT WITH EXISTING SOIL.
- MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.
- NEVER COVER THE TOP OF THE BALL WITH SOIL. MOUND SOIL AROUND THE EXPOSED BALL (1/4").
- BECAUSE OF THE HIGH LEVELS OF NUTRIENTS IN RUNOFF TO BE TREATED, PLANTER PLANTS SHOULD NOT REQUIRE CHEMICAL FERTILIZATION.

TYPICAL RESIDENTIAL DRIVEWAY CONSTRUCTION DETAIL (OR APPROVED EQUAL)

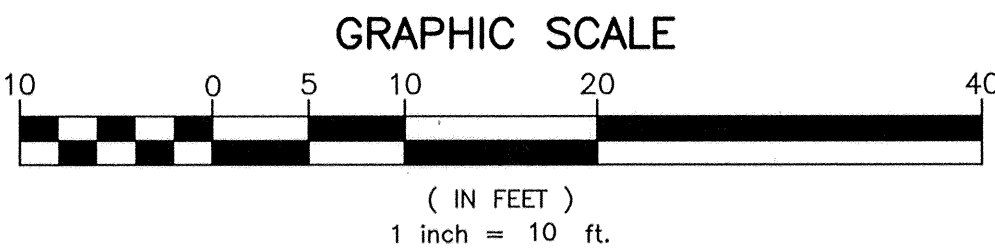


PERVIOUS DRIVEWAY NARRATIVE:

THE ENTIRE PROPOSED DRIVEWAY SHALL BE CONSTRUCTED OF PERVIOUS MATERIAL. THE DETAIL SHOWN IS FOR REFERENCE ONLY AND THE MANUFACTURER'S RECOMMENDATIONS SHOULD BE HONORED TO ENSURE THE WARRANTY IS NOT VOIDED.

PERVIOUS PAVER MAINTENANCE:

A HOMEOWNERS ASSOCIATION SHALL BE FORMED FOR MAINTENANCE OF THE PERVIOUS PAVEMENT. A MAINTENANCE AGREEMENT FOR THE PERVIOUS DRIVEWAY SHALL BE EXECUTED BETWEEN THE CITY OF ALEXANDRIA AND THE HOA. SUCH MAINTENANCE CONSISTS PRIMARILY OF PREVENTION OF CLOGGING OF THE VOID STRUCTURE. VACUUMING ANNUALLY OR MORE OFTEN MAY BE NECESSARY TO REMOVE DEBRIS FROM THE SURFACE OF THE PAVEMENT. OTHER CLEANING OPTIONS MAY INCLUDE POWER BLOWING AND PRESSURE WASHING.



R.C. FIELDS & ASSOCIATES, INC.

22 August 2013

Ms. Claudia Hamblin-Katnik
City Hall - Alexandria
Watershed Program Administrator
301 King Street, Room 3900
Alexandria, VA 22314

RE: The Middleton
DSUP #2012-00029

Dear Ms. Hamblin-Katnik:

On behalf of our client, Royal Market, LLC, we are requesting to provide a monetary contribution to the Alexandria Water Quality Improvement Fund for that portion of the site that is not collected or treated by a BMP facility.

The phosphorous removal requirement and the majority of the Water Quality Default Volume are met through the use of a planter box filters. However, a portion of on-site impervious area from the townhouse roofs is unable to be captured.

We are providing the following method (provided to us by OEQ) for the required contribution to the Alexandria Water Quality Improvement Fund for your approval:

Determine water quality improvement fund fee:
0.0244 acres X 43,560 square feet / acre = 1,063 X \$2.00 / square foot = \$2,126.00

The resulting contribution for this project is \$2,126.00.

Once approved, I will include this request letter along with your approval letter as part of the final site plan that will be submitted to the City of Alexandria for review and approval.

Thank you for your attention to this matter.

Respectfully,
R.C. FIELDS & ASSOCIATES, INC.

Johnathan Brodie
Project Engineer

730 S. WASHINGTON STREET
ALEXANDRIA, VA 22314
TEL: (703) 549-6425
FAX: (703) 549-6425
www.rcfields.com



DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
Office of Environmental Quality
P.O. Box 178 - City Hall
Alexandria, Virginia 22313
http://alexandriava.gov/Environment

September 30, 2013

RC Fields Jr, and Associates
Attn: Johnathan Brodie
730 S. Washington Street
Alexandria, VA 22314

RE: The Middleton
333 N. Royal/316 Princess
DSP 2012-00029

Dear Mr. Brodie:

This is in regard to your letter, dated August 22, 2013 requesting to meet the water quality management performance criteria requiring BMP treatment in a Resource Management Area (Article XIII, Section 13-109(B)(5)(a & b)) by treating 54 percent of the water quality volume in the project area(s) through a BMP and by participating in the City's Water Quality Improvement Fund. You have requested to pay a fee in lieu of providing an on-site BMP as outlined in Article XIII, Section 13-110(A)(2). You have agreed to provide a monetary contribution of \$2,126.00 (1,063 square feet impervious surface x \$2/square foot) to the Alexandria Water Quality Improvement Fund. This represents 21 percent of the overall Water Quality Volume left untreated.

Your request has been approved. The procedure now is to scan your request letter onto your final plan on a sheet that is labeled BMP Details or something similar. Your final plan will be eligible for approval when you have paid the fee (\$2,126.00). The approval of the plan (with your request therein) will act as the approval of your request.

Sincerely,

Claudia Hamblin-Katnik, Ph.D.
Watershed Program Administrator

cc: Shanna Austin, Site Plan Coordinator

STORMWATER MANAGEMENT

THIS PLANTER BOX/BEST MANAGEMENT PRACTICE (BMP) HELPS TO MAINTAIN THE HEALTH OF OUR STREAMS, THE POTOMAC RIVER AND THE CHESAPEAKE BAY.

YOU ARE IN THE
POTOMAC RIVER
WATERSHED

REPORT PROBLEMS TO: (703) 746-4065
CITY OF ALEXANDRIA
DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES

PLANTER BOX FILTER PLAQUE NOTE:

A PLAQUE IDENTIFYING THE PLANTER BOX FILTER AS A BMP WILL BE PROVIDED TO THE SATISFACTION OF THE DIRECTOR OF T&ES. THE MINIMUM WORDING OF THE PLAQUE IS "THIS PLANTER BOX FILTER PROVIDES BEST MANAGEMENT PRACTICES FOR WATER QUALITY MANAGEMENT." BUT MAY BE EXPANDED TO INCLUDE MORE DETAILED INFORMATION.

ESI PEER REVIEW

APPROVED
SPECIAL USE PERMIT NO. 2012-0029

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. DATE
DIRECTOR DATE
CHAIRMAN, PLANNING COMMISSION DATE
DATE RECORDED
INSTRUMENT NO. DEED BOOK NO. DATE

STORM AND BMP COMPUTATIONS
THE MIDDLETON
NORTH ROYAL STREET AND PRINCESS STREET
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
9/24/13	FINAL-2 SUBMISSION
10/28/13	FINAL-3 SUBMISSION
11/19/13	MYLAR

DESIGN: JCB
DRAWN: JCB

SCALE: 1" = 10'
DATE: JULY 2013

SHEET 17 OF 24
FILE: 12-144

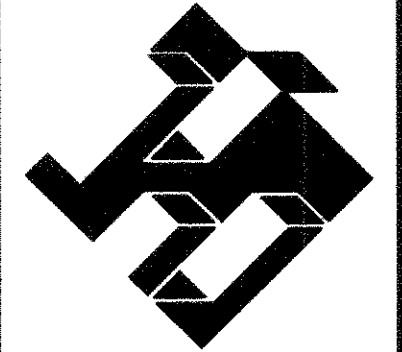
<p>TA #2015-0003 & CDD #2015-0002 430 & 450 South Pickett Street – Cameron Park</p> <p>d. Copies of the plan shall be posted in the construction trailer and given to each subcontractor before they commence work;</p> <p>e. If the plan is found to be violated during the course of construction, citations will be issued for each infraction and a correction notice will be forwarded to the applicant. If the violation is not corrected within five (5) calendar days, a "stop work order" will be issued, with construction halted until the violation has been corrected. * (P&Z)(T&ES)(Code)</p> <p>60. Provide off-street parking for all construction workers without charge to the construction workers. Construction workers shall not be permitted to park on-street. For the construction workers who use Metro, DASH, or another form of mass transit to the site, the applicant shall subsidize a minimum of 50% of the fees for mass transit. Compliance with this condition shall be a component of the construction management plan, which shall be submitted to the Department of P&Z and T&ES prior to final site plan release. This plan shall:</p> <p>a. Establish the location of the parking to be provided at various stages of construction, how many spaces will be provided, how many construction workers will be assigned to the work site, and mechanisms which will be used to encourage the use of mass transit.</p> <p>b. Provide for the location on the construction site at which information will be posted regarding Metro schedules and routes, bus schedules and routes.</p> <p>c. If the plan is found to be violated during the course of construction, a correction notice will be issued to the developer. If the violation is not corrected within five (5) days, a "stop work order" will be issued, with construction halted until the violation has been corrected. * (P&Z)(T&ES)</p> <p>61. The sidewalks shall remain open during construction or pedestrian access shall be maintained to the satisfaction of the Director of T&ES throughout the construction of the project. (T&ES)</p> <p>62. No major construction staging shall be allowed within the public right-of-way on South Pickett Street. The applicant shall meet with T&ES to discuss construction staging activities prior to release of any permits for ground disturbing activities. ** (T&ES)</p> <p>63. Transit stops adjacent to the site shall remain open if feasible for the duration of construction. If construction forces the closure of the stop at adjacent to the site , a temporary ADA accessible transit stop shall be installed. The exact temporary location shall be coordinated with the T&ES Office of Transit Services at 703-746-4075. Signs noting the bus stop closure and location of the temporary bus stop must be installed at all bus stops taken out of service due to construction. (T&ES)</p> <p>64. Any structural elements that extend into the public right of way, including but not limited to footings, foundations, tie-backs etc., must be approved by the Director of T&ES as a part of the Sheeting and Shoring Permit. (T&ES)</p> <p>26</p>	<p>TA #2015-0003 & CDD #2015-0002 430 & 450 South Pickett Street – Cameron Park</p> <p>65. A "Certified Land Disturber" (CLD) shall be named in a letter to the Division Chief of Construction Management & Inspection prior to any land disturbing activities. If the CLD changes during the project, that change must be noted in a letter to the Division Chief. A note to this effect shall be placed on the Phase I Erosion and Sediment Control sheets on the site plan. (T&ES)</p> <p>66. Prior to commencing clearing and grading of the site, the applicant shall hold a meeting with notice to all adjoining property owners and civic associations to review the location of construction worker parking, plan for temporary pedestrian and vehicular circulation, and hours and overall schedule for construction. The Departments of P&Z and T&ES shall be notified of the date of the meeting before the permit is issued. (P&Z)(T&ES)</p> <p>67. Prior to commencement of landscape installation/planting operations, a pre-installation/construction meeting will be scheduled with the project planner in the Department of Planning & Zoning to review the scope of installation procedures and processes. This is in addition to the pre-construction meeting required above. (P&Z)</p> <p>68. Identify a person who will serve as a liaison to the community throughout the duration of construction. The name and telephone number, including an emergency contact number, of this individual shall be provided in writing to residents, property managers and business owners whose property abuts the site and shall be placed on the project sign, to the satisfaction of the Directors of P&Z, and/or T&ES. (P&Z)(T&ES)</p> <p>69. Implement a waste and refuse control program during the construction phase of this development. This program shall control wastes such as discarded building materials, concrete truck washout, chemicals, litter or trash, trash generated by construction workers or mobile food vendor businesses serving them, and all sanitary waste at the construction site and prevent offsite migration that may cause adverse impacts to neighboring properties or to the environment to the satisfaction of Directors of T&ES and Code Administration. All wastes shall be properly disposed offsite in accordance with all applicable federal, state and local laws. (T&ES)</p> <p>70. Temporary construction and/or on-site sales trailer(s) shall be permitted and be subject to the approval of the Director of P&Z. The trailer(s) shall be removed prior to the issuance of a final certificate of occupancy permit. *** (P&Z)</p> <p>71. Submit a wall check prior to the commencement of construction of the first floor above grade framing for the building(s). The wall check shall include the building footprint, as depicted in the approved final site plan, the top-of-slab elevation and the first floor elevation. The wall check shall be prepared and sealed by a registered engineer or surveyor, and shall be approved by the P&Z prior to commencement of framing. (P&Z)</p> <p>72. Submit an as-built development site plan survey, pursuant to the requirements outlined in the initial as-built submission for occupancy portion of the as-built development site plan survey checklist to the Department of Transportation and Environmental Services Site Plan Coordinator prior to requesting a certificate of occupancy permit. The as-built</p> <p>27</p>	<p>TA #2015-0003 & CDD #2015-0002 430 & 450 South Pickett Street – Cameron Park</p> <p>development site plan survey shall be prepared and sealed by a registered architect, engineer, or surveyor. Include a note which states that the height was calculated based on all applicable provisions of the Zoning Ordinance. *** (P&Z) (T&ES)</p> <p>73. Contractors shall not cause or permit vehicles to idle for more than 10 minutes when parked. (T&ES)</p> <p>74. If there are outstanding performance, completion or other bonds for the benefit of the City in effect for the property at such time as it may be conveyed or sold to a party other than the applicant, a substitute bond must be provided by that party or, in the alternative, an assignment or other documentation from the bonding company indicating that the existing bond remains in effect despite the change in ownership may be provided. The bond(s) shall be maintained until such time that all requirements are met and the bond(s) released by the City. (T&ES)</p> <p>75. Prior to each construction phase, the applicant shall coordinate with the Alexandria City Public School (ACPS) to discuss the construction schedule, construction activities that may impact the Samuel Tucker School parking lot and/or other access to the school, and a point of contact for the site. General construction noise shall be minimized and no pile driving shall occur during the annual testing periods at the school. Construction traffic shall be managed to minimize conflicts with morning and afternoon drop-off/pick-up and bus traffic at the school. (ACPS)</p> <p>M. STORMWATER</p> <p>76. Per Memo to Industry 01-2012, runoff from all new public roadways created as part of a development shall be treated by the developer. Requirements for design are found in and shall comply with the City's "Green Sidewalks" BMP Guidelines. http://alexandriava.gov/uploadedFiles/tes/info/memotoindustry01-2012.pdf</p> <p>77. Staff strongly encourages the applicant to consider installation of tree well BMPs along the South Pickett Street and Cameron Station Boulevard frontages.</p> <p>N. WASTEWATER / SANITARY SEWERS:</p> <p>78. The applicant shall submit a letter to the Director of Transportation & Environmental Services prior to release of the final site plan acknowledging that this property will participate, if the City adopts a plan prior to release of the building permit, to require equal and proportionate participation in an improvements plan to mitigate wet weather surcharging in the Holmes Run Trunk Sewer sanitary sewer shed. (T&ES)</p> <p>79. Discharge from pool(s) shall be connected to the sanitary sewer. (T&ES)</p> <p>80. In addition to the sanitary sewer improvements provided in the Preliminary Site Plan, there are two sanitary sewer segments (002758SEWP and 002759SEWP) that are</p> <p>28</p>
<p>TA #2015-0003 & CDD #2015-0002 430 & 450 South Pickett Street – Cameron Park</p> <p>inadequate to serve the proposed development as determined by the applicant's sanitary sewer adequate outfall analysis completed per the City's Memo to Industry 02-07. Therefore, the applicant must, as part of the first Final Site Plan, identify and propose construction of infrastructure improvements to accommodate the proposed development. All proposed infrastructure must be designed and constructed to support future growth/ build out conditions. Incremental costs attributed towards upsizing to accommodate build out conditions shall be credited against the sanitary sewer tap fee. The total credit will be determined by the Director of T&ES. (T&ES)</p> <p>O. SOLID WASTE:</p> <p>81. In order for the City to provide solid waste collection service to the multifamily portion of the site, the development must meet all the minimum street standards. The trash truck must be able to pick up solid waste from private streets without backing up. The containers must be placed inside the units or within an enclosure that completely screens them from view. The developer must purchase the standard containers from the City or provide containers that are compatible with City collection system and approved by the Director of T&ES. Payment shall be made to the City or proof of payment for approved containers provided, prior to issuance of the Certificate of Occupancy for each unit. (T&ES)</p> <p>82. A registered Homeowners Association will be formed for the townhouse portion of the site. The HOA will request approval from the Director of Transportation and Environmental Services to opt-out of the City approved trash and recycling collection to allow for privately contracted collection. The point of collection shall be as agreed upon between the owner and the private collector duly licensed, provided that such point shall not be in a public right-of-way and shall not hinder or interfere with parking, traffic or pedestrians. All trash collectors for the project site are required to take their collected trash to the Alexandria/Arlington waste-to-energy facility (T&ES)</p> <p>83. Provide \$1,150 per receptacle to the Director of T&ES for purchase and installation of three (3) Victor Stanley Ironsites Series model SD-42 receptacle with Dome Lid per block face dedicated to trash collection. The receptacle(s) shall be placed in the public right of way to serve open space and park sites. Receptacles shall be generally located along the property frontage and at strategic locations in the vicinity of the site as approved by the Director of T&ES. Payment required prior to release of Final Site Plan.* (T&ES)</p> <p>84. Provide \$1,240 per receptacle to the Director of T&ES for the purchase and installation of three (3) Victor Stanley Ironsites Series Model SD-42 blue receptacles with Dome Lid per block face dedicated to recycling collection. The receptacle(s) shall be placed in the public right of way to serve open space and park sites. Receptacles shall be generally located along the property frontage and at strategic locations in the vicinity of the site as approved by the Director of T&ES. Payment required prior to release of Final Site Plan. (T&ES)</p> <p>29</p>	<p>TA #2015-0003 & CDD #2015-0002 430 & 450 South Pickett Street – Cameron Park</p> <p>P. STREETS / TRAFFIC:</p> <p>85. The setback between the buildings and the drive aisles shall be a minimum of 2' to provide adequate turning movements. The setback shall have a maximum length of 4' or a minimum of 18', if a driveway is provided. (T&ES)</p> <p>86. If the City's existing public infrastructure is damaged during construction, or patch work required for utility installation then the applicant shall be responsible for construction/ installation or repair of the same as per the City of Alexandria standards and specifications and to the satisfaction of Director, Transportation and Environmental Services. (T&ES)</p> <p>87. A pre-construction walk/survey of the site shall occur with Transportation and Environmental Services Construction Management & Inspection staff to document existing conditions prior to any land disturbing activities. (T&ES)</p> <p>88. Submit a Traffic Control Plan as part of the final site plan, for construction detailing proposed controls to traffic movement, lane closures, construction entrances, haul routes, and storage and staging shall be provided for informational purposes. In addition, the Traffic Control Plan shall be amended as necessary and submitted to the Director of T&ES along with the Building and other Permit Applications as required. The Final Site Plan shall include a statement "FOR INFORMATION ONLY" on the Traffic Control Plan Sheets. (T&ES)</p> <p>89. Mark all private street signs that intersect a public street with a fluorescent green strip to notify the plowing crews, both City and contractor, that they are not to plow those streets. (T&ES)</p> <p>90. All Traffic Control Device design plans, Work Zone Traffic Control plans, and Traffic Studies shall be signed and sealed by a professional engineer, registered in the Commonwealth of Virginia. (T&ES)</p> <p>91. Show turning movements of standard vehicles in the parking structure. Show turning movements of the largest delivery vehicle projected to use each loading dock. Turning movements shall meet AASHTO vehicular guidelines and shall be to the satisfaction of the Director of T&ES. (T&ES)</p> <p>92. Provide and install updated vehicle detection equipment at the intersection of South Pickett Street & Cameron Station Blvd/Edsall Road on all approaches. The updated vehicle detection shall either be thermal video detection or wireless vehicle detection technology to the satisfaction of the Director of T&ES. Include the design with the first residential final site plan. In lieu of providing and installing updated vehicle detection equipment, the applicant may provide a \$20,000 contribution to the City of Alexandria for the City to complete the upgrades. If the contribution in lieu option is chosen by the applicant, the \$20,000 contribution shall be made prior to release of the first residential final site plan. (T&ES) ***</p> <p>30</p>	<p>TA #2015-0003 & CDD #2015-0002 430 & 450 South Pickett Street – Cameron Park</p> <p>93. The slope on parking ramp to garage entrance shall not exceed 12 percent. For slopes 10% and greater, provide trench drain connected to a storm sewer to eliminate or diminish the possibility of ice forming. (T&ES)</p> <p>94. Furnish and install two 4" conduits with pull wires, and junction boxes located at a maximum interval of 300' underneath the sidewalk on South Pickett Street along the site frontage around the perimeter of the site. These conduits shall terminate in an underground junction box at each end of the South Pickett Street site frontage. The junction box cover shall have the word "TRAFFIC" engraved in it. (T&ES)</p> <p>Q. UTILITIES:</p> <p>95. Locate all private utilities without a franchise agreement outside of the public right-of-way and public utility easements. No transformers or switch gear shall be installed in the right-of-way. (T&ES)</p> <p>96. The applicant shall underground all overhead utilities along S. Pickett Street and Cameron Station Blvd upon delivery of the multifamily buildings. (T&ES)</p> <p>R. SOILS:</p> <p>97. Provide a geotechnical report, including recommendations from a geotechnical professional for proposed cut slopes and embankments. (T&ES)</p> <p>S. WATERSHED, WETLANDS, & RPAs:</p> <p>98. The storm water collection system is located within the Backlick watershed. All on-site storm water curb inlets and public curb inlets within 50 feet of the property line shall be duly marked using standard City markers, or to the satisfaction of the Director of T&ES. (T&ES)</p> <p>99. Project lies entirely within an area described on historical maps as containing marine clays. Construction methodology and erosion and sediment control measures must account for the presence of marine clay or highly erodible soils. (T&ES)</p> <p>T. BMP FACILITIES:</p> <p>100. The City of Alexandria's storm water management regulations regarding water quality are two-fold: first, phosphorus removal requirement and second, water quality volume default. Compliance with the phosphorus requirement does not relieve the applicant from the water quality default requirement. The water quality volume determined by the site's proposed impervious area shall be treated in a Best Management Practice (BMP) facility. (T&ES)</p> <p>31</p>

DATE	REVISION
9-15-15	FSP #1 SUBMISSION
11-3-15	FSP #2 SUBMISSION
12-11-15	FSP #3 SUBMISSION
01-20-16	PARTIAL RELEASE
03-04-16	MA #1 - DEMO SLAB
03-18-16	MA #2 - EES PH 1B
03-25-16	FSP #4 SUBMISSION

ALL CONSTRUCTION SHALL CONFORM TO THE
CURRENT CITY OF ALEXANDRIA STANDARDS AND
SPECIFICATIONS

christopher consultants

engineering · surveying · land planning
9900 main street (fourth floor) Fairfax, VA 22030
phone 703.273.6820 fax 703.273.7636



COMMONWEALTH OF VIRGINIA

JOHN C. LEVTOV

Lic. No. 33635
03/25/16




PROFESSIONAL ENGINEER

DSUP CONDITIONS

BRANDYWINE SENIOR LIVING
AT CAMERON PARK

THE CITY OF ALEXANDRIA, VIRGINIA

ESI
PEER REVIEW

APPROVED		
SPECIAL USE PERMIT NO. DSUP# 2015-0003		
DEPARTMENT OF PLANNING & ZONING		
	DATE	5/24/16
DIRECTOR		
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES		
SITE PLAN NO.		
	DATE	6-14-16
DIRECTOR		
	DATE	5/24/16
CHAIRMAN, PLANNING COMMISSION		
DATE RECORDED		
INSTRUMENT NO. DEED BOOK NO. PAGE NO.		

PROJECT NO: 06013.016.00
SCALE: N/A
DATE: 8/24/15
DESIGN: BD
DRAWN: BD
CHECKED: EG
SHEET No.

C103.
102257

inteer

Live
Play
Services
Business
Government
Projects & Plans
Events
I want to...

Volunteer Opportunities in Alexandria

Many City programs need volunteer support to provide services to residents. Learn how you can get involved in serving your community today!

Page updated on Sep 9, 2016 at 4:14 PM

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- [Alexandria City Government](#)
- [City Departments](#)
- [City News Releases](#)

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storm

Categories	Department	Volunteer Job Title	Volunteer Job Description	Contact Person
Environment, Opportunities for Families, Opportunities for Teens, Opportunities for Groups	Transportation & Environmental Services	Storm Drain Marking	Help prevent water pollution by marking storm drains in Alexandria! Water that flows into storm drains is not treated and flows directly to our streams. Help get the message out to the community and prevent illegal dumping into storm drains. This is a great volunteer opportunity for groups. Volunteers will install several plastic storm drain markers on storm inlets along the roads throughout the City. Volunteers will be working outside.	Sara DeGroot (sara.degroot@alexandriava.gov , 703-746-4127)

<https://www.alexandriava.gov/Volunteer>

[BACK TO TOP](#)

THE CITY'S TMDL APPROACH

Implementation of the TMDL is carried out by the City. The City performs the following in support of this effort:

- Special Use Permits (SUPs) for new developments require screening for PCBs as part of the site characterization.
- Municipal properties are assessed for sources of PCBs. Stormwater runoff is evaluated from properties that have a high risk of PCB contamination.
- Construction sites are monitored and inspected for erosion and sedimentation control.
- Dry weather outfall screenings are performed annually for sources of illicit discharges.



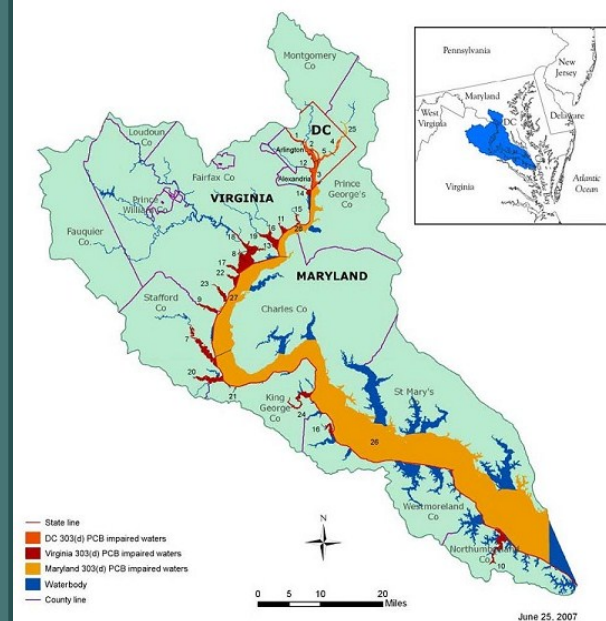
For more information contact::

The City of Alexandria
Department of Transportation & Environmental
Services
Stormwater and Sanitary Infrastructure Division
2900-B Business Center Drive
Alexandria, VA 22314
Phone: 703-746-4014
www.alexandriava.gov/environment

The Virginia Department of Environmental Quality
[http://www.deq.state.va.us/Programs/Water/
WaterQualityInformationTMDLs/TMDL.aspx](http://www.deq.state.va.us/Programs/Water/WaterQualityInformationTMDLs/TMDL.aspx)



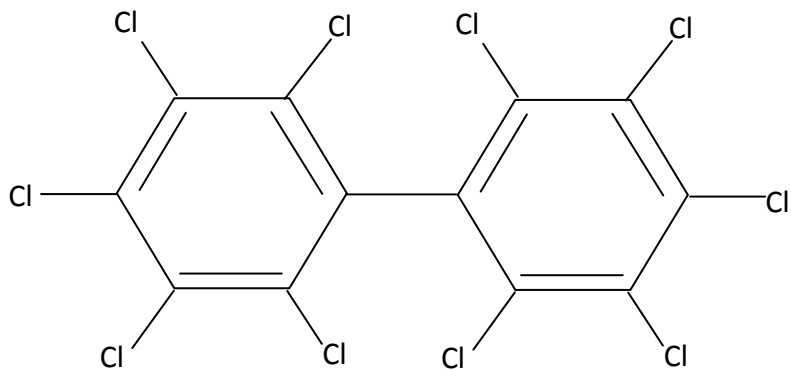
Publication date 6/18/2014



PCBs POLYCHLORINATED BIPHENYLS

Tidal Potomac River PCB
Total Maximum Daily Load
(TMDL)

City of Alexandria, VA



PCBs

Polychlorinated Biphenyls

What are PCBs?

PCBs are part of a family of man-made organic chemicals known as chlorinated hydrocarbons. PCBs were manufactured in the United States from 1929 until their manufacture was banned in 1979.

Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in many industrial and commercial applications. PCBs were used as lubricants and coolants; in electrical and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless copy paper; and in many other applications.

Where are PCBs found?

Before the 1979 ban, PCBs entered the environment during its manufacture and use.

Although they are no longer produced in the United States, PCBs may be present in products and materials produced before 1979.

PCBs can be released into the environment from poorly maintained hazardous waste sites, illegal or improper dumping of PCB wastes, leaks or releases from electrical transformers, and disposal of PCB-containing consumer products into landfills not designed to handle hazardous waste. PCBs may also be released into the environment by the burning of some wastes in incinerators.

Why are PCBs Harmful?



Once in the environment, PCBs do not break down quickly and may remain for long periods of time in the air, water, and soil. In surface waters, PCBs adhere to particles in sediments. They can remain buried in sediments for a long time and be slowly released into the water and then evaporate into air.

PCBs can accumulate in the leaves and above-ground parts of plants and food crops. They also accumulate in the bodies of small organisms and fish. As a result, people who ingest fish that have been exposed to PCBs may also be exposed to the PCBs that are found in the fish they are eating.

PCBs have been known to cause cancer, and have other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system.

VICINITY MAP

VCS 83

BUILDING CODE ANALYSIS:

COMPLETE STREETS INFORMATION:

ENVIRONMENTAL SITE ASSESSMENT

1. THERE ARE NO RESOURCE PROTECTION AREAS (RPA'S), TIDAL WETLANDS, SHORES, TRIBUTARY STREAMS, FLOOD PLAINS, OR BUFFER AREAS FOR SHORES, WETLANDS, CONNECTED TIDAL WETLANDS, ISOLATED WETLANDS OR HIGHLY ERODIBLE/PERMEABLE SOILS LOCATED ON THIS SITE. THERE ARE NO WETLAND PERMITS REQUIRED FOR THE DEVELOPMENT ON THIS PROPERTY.
2. THE CITY OF ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES, DIVISION OF ENVIRONMENTAL QUALITY MUST BE NOTIFIED IF UNUSUAL OR UNANTICIPATED CONTAMINATION OR UNDERGROUND STORAGE TANKS, DRUMS AND CONTAINERS ARE ENCOUNTERED AT THE SITE. IF THERE IS ANY DOUBT ABOUT PUBLIC SAFETY OR A RELEASE TO THE ENVIRONMENT, THE ALEXANDRIA FIRE DEPARTMENT MUST BE CONTACTED IMMEDIATELY BY CALLING 911. THE TANK OR CONTAINER'S REMOVAL, ITS CONTENTS, ANY SOIL CONTAMINATION AND RELEASE TO THE ENVIRONMENT WILL BE HANDLED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY REGULATIONS.
3. ALL WELLS TO BE DEMOLISHED ON THIS PROJECT, INCLUDING MONITORING WELLS, MUST BE CLOSED IN ACCORDANCE WITH STATE WELL REGULATION. CONTACT THE ALEXANDRIA HEALTH DEPARTMENT AT 703-746-4866.
4. THERE ARE NO KNOWN CONTAMINATED AREAS, CONTAMINATED SOILS OR ENVIRONMENTAL ISSUES ASSOCIATED WITH THIS SITE. A SITE CHARACTERIZATION REPORT WILL BE SUBMITTED TO THE CITY OF ALEXANDRIA FOR REVIEW TO DETAIL THE LOCATION, APPLICABLE CONTAMINANTS, AND THE ESTIMATED QUANTITY OF ANY CONTAMINATED SOILS AND/OR GROUNDWATER AT OR IN THE IMMEDIATE VICINITY OF THE SITE.

ALL REQUIRED PERMITS FROM VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, ENVIRONMENTAL PROTECTION AGENCY, ARMY CORPS OF ENGINEERS, VIRGINIA MARINE RESOURCES MUST BE IN PLACE FOR ALL PROJECT CONSTRUCTION AND MITIGATION WORK PRIOR TO RELEASE OF THE FINAL SITE PLAN.

THIS PROJECT PROPOSES CONSTRUCTION ACTIVITIES THAT DISTURB LESS THAN 1 ACRE, THEREFORE A VPDES PERMIT IS NOT REQUIRED.

THE APPLICANT/DEVELOPER SHALL CALL ALEXANDRIA ARCHAEOLOGY (703/746-4399) TWO WEEKS BEFORE THE STARTING DATE OF ANY GROUND DISTURBANCE SO THAT A MONITORING AND INSPECTION SCHEDULE FOR CITY ARCHAEOLOGISTS CAN BE ARRANGED.

THE APPLICANT/DEVELOPER SHALL CALL ALEXANDRIA ARCHAEOLOGY IMMEDIATELY (703-746-4399) IF ANY BURIED STRUCTURAL REMAINS (WALL FOUNDATIONS, WELLS, PRIVIES, CISTERNS, ETC.) OR CONCENTRATIONS OF ARTIFACTS ARE DISCOVERED DURING DEVELOPMENT. WORK MUST CEASE IN THE AREA OF THE DISCOVERY UNTIL A CITY ARCHAEOLOGIST COMES TO THE SITE AND RECORDS THE FINDS.

THE APPLICANT/DEVELOPER SHALL NOT ALLOW ANY METAL DETECTION OR ARTIFACT COLLECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHAEOLOGY.

1. PRIOR TO THE APPLICATION FOR NEW CERTIFICATE OF OCCUPANCY, THE APPLICANT SHALL SUBMIT A BUILDING PERMIT FOR A CHANGE OF USE. DRAWINGS PREPARED BY A LICENSED ARCHITECT OR PROFESSIONAL ENGINEER SHALL ACCOMPANY THE PERMIT APPLICATION. THE PLANS SHALL SHOW PROPOSED CONDITIONS AND PROVIDE DATA BY THE DESIGN PROFESSIONAL WHICH DETAILS HOW THE PROPOSED USE WILL COMPLY WITH THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE FOR THE NEW USE IN THE AREA OF STRUCTURAL STRENGTH, MEANS OF EGRESS, PASSIVE AND ACTIVE FIRE PROTECTION, HEATING AND VENTILATING SYSTEMS, HANDICAPPED ACCESSIBILITY AND PLUMBING FACILITIES.
2. NEW CONSTRUCTION MUST COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).
3. BEFORE A BUILDING PERMIT CAN BE ISSUED ON ANY PROPOSED FUTURE ALTERATIONS, A CERTIFICATION IS REQUIRED FROM THE OWNER OR OWNER'S AGENT THAT THE BUILDING HAS BEEN INSPECTED BY A LICENSED ASBESTOS INSPECTOR FOR THE PRESENCE OF ASBESTOS.
4. A CERTIFICATE OF OCCUPANCY SHALL BE OBTAINED PRIOR TO ANY OCCUPANCY OF THE BUILDING OR PORTION THEREOF.
5. REQUIRED EXITS, PARKING, AND ACCESSIBILITY WITHIN THE BUILDING FOR PERSONS WITH DISABILITIES MUST COMPLY WITH USBC CHAPTER 11. HANDICAPPED ACCESSIBLE BATHROOMS SHALL ALSO BE PROVIDED.
6. TOILET FACILITIES FOR PERSONS WITH DISABILITIES: LARGER, DETAILED, DIMENSIONED DRAWINGS ARE REQUIRED TO CLARIFY SPACE LAYOUT AND MOUNTING HEIGHTS OF AFFECTED ACCESSORIES. INFORMATION ON DOOR HARDWARE FOR THE TOILET STALL IS REQUIRED (USBC 1109.2.2).
7. IF APPLICABLE, ENCLOSED PARKING GARAGES MUST BE VENTILATED IN ACCORDANCE WITH USBC 406.4.2. THE REQUIRED MECHANICAL VENTILATION RATE FOR AIR IS 0.75 CFM PER SQUARE FOOT OF THE FLOOR AREA (USBC 2801.1). IN AREAS WHERE MOTOR VEHICLES OPERATE FOR A PERIOD OF TIME EXCEEDING 10 SECONDS, THE VENTILATION RETURN AIR MUST BE EXHAUSTED. AN EXHAUST SYSTEM MUST BE PROVIDED TO CONNECT DIRECTLY TO THE MOTOR VEHICLE EXHAUST (USBC 2801.1).
8. ELECTRICAL WIRING METHODS AND OTHER ELECTRICAL REQUIREMENTS MUST COMPLY WITH NFPA 70, 2008.
9. IF APPLICABLE, THE PUBLIC PARKING GARAGE FLOOR MUST COMPLY WITH USBC 406.2.6 AND DRAIN THROUGH OIL SEPARATORS OR TRAPS TO AVOID ACCUMULATION OF EXPLOSIVE VAPORS IN BUILDING DRAINS OR SEWERS AS PROVIDED FOR IN THE PLUMBING CODE (USBC 2901). THIS PARKING GARAGE IS CLASSIFIED AS AN S-2, GROUP 2, PUBLIC GARAGE.
10. THIS PROJECT IS LOCATED IN A COMBINED SEWER AREA.
11. THIS SITE DOES NOT CONTAIN ANY AREAS PREVIOUSLY MAPPED AS MARINE CLAYS.

THE APPLICANT IS PROPOSING THE REDEVELOPMENT OF THE EXISTING ASPHALT PARKING LOT INTO AN 18 UNIT TOWNHOUSE DEVELOPMENT WITH REAR LOAD GARAGES AND IMPROVED STREETScape/OPEN SPACE. THIS DEVELOPMENT IS LOCATED IN THE BRADDOCK METRO AREA AND WILL BE COMPATIBLE WITH THE BRADDOCK METRO NEIGHBORHOOD PLAN.

- MASTER PLAN AMENDMENT
- REZONING TO CRMU-L
- DEVELOPMENT SPECIAL USE PERMIT WITH SITE PLAN
- SUP FOR AN INCREASE IN FLOOR AREA RATIO TO 1.5
- SUP FOR LOTS WITHOUT FRONTAGE ON A PUBLIC STREET (LOTS 14-18)
- MODIFICATION OF FRONT, SIDE, AND REAR YARD SETBACK (LOTS 1-18)
- MODIFICATION OF THE VISION CLEARANCE TRIANGLE
- SUBDIVISION

COVER SHEET	SHEET 1
CONDITIONS(1 OF 3)	SHEET 2
CONDITIONS(2 OF 3)	SHEET 3
CONDITIONS(3 OF 3)	SHEET 4
NOTES	SHEET 5
CONTEXTUAL PLAN	SHEET 6
EXISTING CONDITIONS AND DEMOLITION PLAN	SHEET 7
FINAL SITE PLAN	SHEET 8
SITE DIMENSION PLAN	SHEET 9
EROSION & SEDIMENT CONTROL PLAN PHASE I	SHEET 10
EROSION & SEDIMENT CONTROL PLAN PHASE II	SHEET 11
EROSION & SEDIMENT CONTROL NARRATIVES	SHEET 12
EROSION & SEDIMENT CONTROL DETAILS	SHEET 13
STORMWATER QUALITY MANAGEMENT PLAN (1 OF 3)	SHEET 14
STORMWATER QUALITY MANAGEMENT PLAN (2 OF 3)	SHEET 15
STORMWATER QUALITY MANAGEMENT PLAN (3 OF 3)	SHEET 16
ONSITE STORM SEWER PLAN AND PROFILE	SHEET 17
OUTFALL ANALYSIS	SHEET 18
WATER LINE PLAN AND PROFILE	SHEET 19
SANITARY SEWER PLAN AND PROFILE	SHEET 20
SANITARY SEWER OUTFALL ANALYSIS	SHEET 21
SIGHT DISTANCE PLAN AND PROFILE	SHEET 22
WATER MANAGEMENT PLAN AND TURNING MOVEMENTS	SHEET 23
CURB RAMP GRADING DETAILS	SHEET 24
FIRE SAFETY PLAN	SHEET 25
SITE DETAILS (1 OF 4)	SHEET 26
SITE DETAILS (2 OF 4)	SHEET 27
SITE DETAILS (3 OF 4)	SHEET 28
SITE DETAILS (4 OF 4)	SHEET 29
SUBDIVISION PLAT (FOR INFORMATION ONLY)	SHEET 30
VAMC EASEMENT PLAT (FOR INFORMATION ONLY)	SHEET 31

OVERALL PLAN	L1.00
HARDSCAPE DETAILS	L2.00
HARDSCAPE DETAILS	L2.01
HARDSCAPE DETAILS	L2.02
PRODUCT INFORMATION	L3.00
LANDSCAPE PLAN	L4.00
TREE CANOPY	L4.01
LANDSCAPE NOTES AND DETAILS	L4.02
PHOTOMETRICS	L5.00

CONCEPT FLOOR PLANS	A1.0
RENDERED PRIMARY ELEVATIONS	A2.0
ELEVATIONS	A2.1
ELEVATIONS	A2.2
ELEVATIONS	A2.3
ELEVATIONS	A2.4
ENLARGED ELEVATIONS	A2.5
BUILDING SECTIONS	A3.1

SURVEYOR'S CERTIFICATE

I, DARRYL BOWSER, HEREBY CERTIFY THAT I HAVE CAREFULLY SURVEYED THE PROPERTY DELINEATED BY THIS PLAT, AND THAT IT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT IT IS A SUBDIVISION OF THE LAND OWNED BY HENRY STREET JV, LLC, DATED 12/17/2014 AND RECORDED AMONG THE LAND RECORDS OF THE CITY OF ALEXANDRIA LAND CONVEYED TO HENRY STREET WITH INSTRUMENT #140018379 AND IS WITHIN THOSE BOUNDARIES; AND THAT ALL REQUIRED MONUMENTS HAVE BEEN INSTALLED WHERE INDICATED EXCEPT THOSE THAT WILL BE INSTALLED AT A LATER DATE BUT BEFORE THE COMPLETION OF THE PROJECT. IRON PIPES MARKED THUS—O—WILL BE SET AS INDICATED. GIVEN UNDER MY HAND THIS 23rd DAY OF OCTOBER, 2015

ESI
PEER REVIEW

1. ZONE OF SITE: EXISTING CSL (COMMERCIAL SERVICE LOW)
PROPOSED CRMU-L (COMMERCIAL RESIDENTIAL MIXED USE LOW)

2. USE: EXISTING VACANT LAND/COMMERCIAL PARKING PROPOSED TOWNHOUSE - RESIDENTIAL

3. TOTAL LOT AREA: 29.253 S.F. OR 0.6778 AC. MINIMUM LOT AREA: N/A

LOT 1	<u>718 SF</u>	LOT 8	<u>882 SF</u>	LOT 15	<u>1,045 SF</u>
LOT 2	<u>696 SF</u>	LOT 9	<u>881 SF</u>	LOT 16	<u>1,045 SF</u>
LOT 3	<u>696 SF</u>	LOT 10	<u>880 SF</u>	LOT 17	<u>1,045 SF</u>
LOT 4	<u>696 SF</u>	LOT 11	<u>879 SF</u>	LOT 18	<u>1,213 SF</u>
LOT 5	<u>696 SF</u>	LOT 12	<u>878 SF</u>	PARCEL A	<u>13,265 SF</u>
LOT 6	<u>718 SF</u>	LOT 13	<u>923 SF</u>		
LOT 7	<u>1,322 SF</u>	LOT 14	<u>1,045 SF</u>		

- | 4. NUMBER OF DWELLING UNITS: | <u>18</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|---|--------------------------|----------------------------|--------------------------|-------------|------|-------|-------|-----------|-----|-------|-------|-------------|-------|-------|-------|-----------|------------|-----|-----|-------------|------|-------|-------|-----------|-------|-------|-------|--------------------|---|-----|-----|-------|--|--------|--------|--|--|
| 5. UNITS PER ACRE: | PERMITTED: <u>N/A</u> | PROPOSED: <u>26.6</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. FLOOR AREA: | <table border="1"> <thead> <tr> <th>BUILDING TYPE</th><th>CORRESPONDING LOTS</th><th>GROSS FLOOR AREA/UNIT (SF)</th><th>NET FLOOR AREA/UNIT (SF)</th></tr> </thead> <tbody> <tr> <td>16.5' X 40'</td><td>1, 6</td><td>2,448</td><td>2,203</td></tr> <tr> <td>16' X 40'</td><td>2-5</td><td>2,374</td><td>2,136</td></tr> <tr> <td>20' X 40.5'</td><td>7, 13</td><td>2,993</td><td>2,694</td></tr> <tr> <td>21' X 20'</td><td>7 (GARAGE)</td><td>420</td><td>420</td></tr> <tr> <td>19' X 40.5'</td><td>8-12</td><td>2,812</td><td>2,531</td></tr> <tr> <td>19' X 40'</td><td>14-18</td><td>2,777</td><td>2,500</td></tr> <tr> <td>WINDOW PROJECTIONS</td><td>-</td><td>291</td><td>291</td></tr> <tr> <td>TOTAL</td><td></td><td>49,034</td><td>44,204</td></tr> </tbody> </table> | BUILDING TYPE | CORRESPONDING LOTS | GROSS FLOOR AREA/UNIT (SF) | NET FLOOR AREA/UNIT (SF) | 16.5' X 40' | 1, 6 | 2,448 | 2,203 | 16' X 40' | 2-5 | 2,374 | 2,136 | 20' X 40.5' | 7, 13 | 2,993 | 2,694 | 21' X 20' | 7 (GARAGE) | 420 | 420 | 19' X 40.5' | 8-12 | 2,812 | 2,531 | 19' X 40' | 14-18 | 2,777 | 2,500 | WINDOW PROJECTIONS | - | 291 | 291 | TOTAL | | 49,034 | 44,204 | | |
| BUILDING TYPE | CORRESPONDING LOTS | GROSS FLOOR AREA/UNIT (SF) | NET FLOOR AREA/UNIT (SF) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16.5' X 40' | 1, 6 | 2,448 | 2,203 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16' X 40' | 2-5 | 2,374 | 2,136 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20' X 40.5' | 7, 13 | 2,993 | 2,694 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21' X 20' | 7 (GARAGE) | 420 | 420 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19' X 40.5' | 8-12 | 2,812 | 2,531 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19' X 40' | 14-18 | 2,777 | 2,500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WINDOW PROJECTIONS | - | 291 | 291 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | 49,034 | 44,204 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. FLOOR AREA RATIO: | PERMITTED <u>1.50 (44,285 SQ.FT.)</u>
EXISTING <u>0.008 (250 SQ.FT.)</u>
PROPOSED <u>1.50 (44,204 SQ.FT.)</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8. OPEN SPACE: | REQUIRED:
40% OF TOTAL SITE AREA = 11,809 SQ. FT.
PROPOSED:
GROUND LEVEL** 7,390 SQ. FT. (25.0%)
ABOVE GRADE <u>4,792 SQ. FT. (16.2%)</u>
TOTAL <u>12,182 SQ. FT. (41.3%)</u> | **ALL GROUND LEVEL OPEN SPACE IS USEABLE OPEN SPACE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

9. AVERAGE FINISHED GRADE:
- | | | | | | |
|--------|--------------|---------|--------------|---------|--------------|
| UNIT 1 | <u>46.11</u> | UNIT 8 | <u>45.40</u> | UNIT 15 | <u>45.94</u> |
| UNIT 2 | <u>45.94</u> | UNIT 9 | <u>45.34</u> | UNIT 16 | <u>46.19</u> |
| UNIT 3 | <u>45.94</u> | UNIT 10 | <u>45.11</u> | UNIT 17 | <u>46.60</u> |
| UNIT 4 | <u>45.78</u> | UNIT 11 | <u>45.11</u> | UNIT 18 | <u>47.10</u> |
| UNIT 5 | <u>45.78</u> | UNIT 12 | <u>44.82</u> | | |
| UNIT 6 | <u>45.61</u> | UNIT 13 | <u>44.65</u> | | |
| UNIT 7 | <u>45.39</u> | UNIT 14 | <u>45.43</u> | | |

10. HEIGHT: ALLOWED: 50.0' (PER BRADDOCK METRO NEIGHBORHOOD PLAN)

PROPOSED:			
UNIT 1	<u>41.63</u>	UNIT 8	<u>41.50</u>
UNIT 2	<u>41.79</u>	UNIT 9	<u>41.56</u>
UNIT 3	<u>41.79</u>	UNIT 10	<u>41.79</u>
UNIT 4	<u>41.96</u>	UNIT 11	<u>41.79</u>
UNIT 5	<u>41.96</u>	UNIT 12	<u>42.08</u>
UNIT 6	<u>42.12</u>	UNIT 13	<u>42.25</u>
UNIT 7	<u>41.51</u>	UNIT 14	<u>42.67</u>
UNIT 15	<u>42.17</u>	UNIT 16	<u>41.92</u>
UNIT 17	<u>41.50</u>	UNIT 18	<u>41.00</u>

11. YARDS: REQUIRED: FRONT
- N/A
- SIDE
- N/A
- REAR
- N/A

PROVIDED:											
LOT	FRONT	SIDE	REAR	LOT	FRONT	SIDE	REAR	LOT	FRONT	SIDE	REAR
1	0.5'	0'	3.0'	8	2.9'	0'	3.0'	15	12.0'	0'	3.0'
2	0.5'	0'	3.0'	9	2.9'	0'	3.0'	16	12.0'	0'	3.0'
3	0.5'	0'	3.0'	10	2.8'	0'	3.0'	17	12.0'	0'	3.0'
4	0.5'	0'	3.0'	11	2.8'	0'	3.0'	18	12.0'	0'	3.0'
5	0.5'	0'	3.0'	12	2.7'	0'	3.0'				
6	0.5'	0'	3.0'	13	2.7'	0'	3.0'				
7	3.0'	0'	N/A	14	12.0'	0'	3.0'				

- | | | | | |
|------------------------|-------------------|---|-------------------|------------------------------------|
| 12. FRONTAGE: | REQUIRED | <u>50'</u> | PROVIDED | <u>227.63' (NORTH HENRY ST)</u> |
| | | | | <u>117.50' (PENDLETON ST)</u> |
| 13. TRIP GENERATION: | EXISTING | <u>186 VPD</u> | PROPOSED | <u>117 VPD (PER ITE STANDARDS)</u> |
| | | | PROPOSED AM PEAK: | <u>13 VPD (PER ITE STANDARDS)</u> |
| | | | PROPOSED PM PEAK: | <u>45 VPD (PER ITE STANDARDS)</u> |
| 14. PARKING TABULATION | PARKING REQUIRED: | <u>2.0 SPACES / UNIT = 2.0 x 18 = 36 SPACES</u> | | |
| | PARKING PROVIDED: | <u>36 STANDARD PARKING SPACES (GARAGE)</u> | | |
| 15. LOADING SPACES: | REQUIRED | <u>0</u> | PROPOSED | <u>0</u> |

OWNER:	ARCHITECT:
HENRY STREET JV LLC	LESSARD DESIGN
1156 15TH STREET NW, SUITE 1000	8521 LEESBURG PIKE, SUITE 700
WASHINGTON, DC 20005	VIENNA, VA 22182
INSTRUMENT #140018379	(571) 830-1800
	CONTACT: BILL FOLIACO

DEVELOPER:
NORTHFIELD CONSTRUCTION
& DEVELOPMENT
1156 15TH STREET NW, SUITE 1000
WASHINGTON, DC 20005
(202) 577-5065
CONTACT: NATHAN HAMMAN

ARCHITECT:
LESSARD DESIGN
8521 LEESBURG PIKE, SUITE 700
VIENNA, VA 22182
(571) 830-1800
CONTACT: BILL FOLIACO

ATTORNEY:
WALSH, COLUCCI, LUBELEY
& WALSH, P.C.
2200 CLARENDON BLVD SUITE 1300
ARLINGTON, VIRGINIA 22201
(703) 528-4700
CONTACT: M. CATHARINE PUSKAR

LANDSCAPE ARCHITECTURE:
STUDIO 39 LANDSCAPE ARCHITECTURE, P.C.
6416 GROVEDALE DRIVE, SUITE 100-A
ALEXANDRIA, VA 22310
(703) 719-6500 X106
CONTACT: DAN DOVE


RCFIELDS
& ASSOCIATES, INC.

ENGINEERING • LAND SURVEYING • PLANNING
 www.rcfields.com
 730 S. Washington Street
 Alexandria, Virginia 22314
 (703) 549-6422

PROJ. MANAGER: ANDREA SPRUCH
 EMAIL: ASPRUCH@RCFASOCCOM

DATE: NOV. 2015	DRAWN: ACS
REV:	

SCALE: AS NOTED

[illegible]

FINAL SITE PLAN

THE PARK RESIDENCES

601 NORTH HENRY STREET
CITY OF ALEXANDRIA, VIRGINIA

APPROVED

SPECIAL USE PERMIT NO. 2014-0017

DEPARTMENT OF PLANNING & ZONING

DOI: 10.1002/for

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

[illegible]

CHAIRMAN, PLANNING COMMISSION

DATE

INSTRUMENT NO.	DEED BOOK NO.	DATE

J:\2014\1424\DWG\DELTA\Final Site Plan\03 CONDITIONS (2 OF 3).dwg
Fri, Mar 11 2016 - 1:25:37pm

Appendix B – Minimum Control Measure #2

1. City's Website with MS4 Program Plan and Annual Report
2. Sample Environmental Policy Commission Meeting Agenda and Presentation
3. Alexandria Earth Day Poster
4. Alexandria Earth Day Survey Results
5. Alexandria Earth Day eNews

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Stormwater Management

← → ↻ <https://www.alexandriava.gov/tes/oeq/info/default.aspx?id=3844#MunicipalSeparateStormSewerSystem> ☆ ☰

Controlling sediment and debris at construction sites has many benefits in addition to avoiding environmental degradation. These benefits include reducing mud and litter in the street and reduction of sediment and debris in storm sewers.

Municipal Separate Storm Sewer System (MS4) Program

City's Stormwater Program Recognized by Water Environment Federation

On Monday, September 28, 2015, the Phase II MS4 Program was recognized by the Water Environment Federation's (WEF) National Municipal Stormwater and Green Infrastructure Awards Program as a Gold-level community and winner in the Phase II Innovation category. Visit [WEF's MS4 Awards](#) for more information on the awards program. More information on the City's MS4 Program is provided below.

MS4 Stormwater Program Plan

Under the Virginia Pollution Discharge Elimination System (VPDES) regulations, the City is required to control stormwater pollution to the maximum extent practicable and to develop a pollution prevention plan – known as a Municipal Separate Storm Sewer System (MS4) Program Plan. Under two previous permit cycles, the City's initial plan was developed in 2003 and was revised in 2008. Per the current MS4 permit, the program plan was revised in June 2014 and again in June 2015 to reflect changes in the MS4 permit. The permit contains Six Minimum Control Measures (MCMs) listed below. The City has developed appropriate and effective Best Management Practices (BMPs) to control stormwater pollution to the maximum extent practicable. The current [MS4 Program Plan](#) contains the BMPs that address the MCMs, with a overview provided below.

MS4 Annual Reports

Also under the VPDES MS4 permit regulations, the City is required to submit an annual report to the Virginia Department of Environmental Quality (DEQ). The report provides details of the BMPs the City performs as part of the MS4 Program Plan to meet or exceed the control measures (MCMs) of the MS4 Phase II General Permit. The City is required to keep all annual reports online for the current permit.

The following annual report covers the July 1, 2013 to June 30, 2014 reporting period .

[Alexandria MS4 Annual Report Main Body](#)

[Alexandria MS4 Annual Report AppendixA](#)

[Alexandria MS4 Annual Report AppendixB](#)

[Alexandria MS4 Annual Report AppendixC](#)

[Alexandria MS4 Annual Report AppendixD](#)

[Alexandria MS4 Annual Report AppendixE](#)

[Alexandria MS4 Annual Report AppendixF](#)

The following annual report covers the July 1, 2014 to June 30, 2015 reporting period.

[Alexandria MS4 PY2 Annual Report 2014-2015](#)

Public Education and Outreach

The City of Alexandria strives to educate and inform the public on the importance of our local waterways, watersheds, and stormwater related issues through brochures, televised messages, and signs.

The City has put together several brochures designed to educate the public on the various ways they can help reduce the impact of pollutants to local streams and waterways.



AGENDA

Environmental Policy Commission REGULAR MEETING

Monday, March 21, 2016

7:30 - 9:25 PM

City Hall, Room 2000 (Second Floor)

7:30 – 7:35	Welcome and Public Comments
7:35 – 7:45	Staff Consent items and EPC updates
7:45 – 7:50	Earth Day Report/EPC Activity, Natasha Andersen
7:50 – 8:20	Fitzgerald Square Proposed Plan, Tony Gammon, Deputy Director, Dept. of Project Implementation
8:20 – 8:40	City Resource Recovery Program (Jim Kapsis)
8:40 – 9:00	Old Town North Small Area Plan Update Recommendation Letter, Scott Barstow
9:00 – 9:15	Eco-City Update, Khoa Tran, Office of Environmental Quality
9:15 – 9:25	Agenda for next Work Session and full meeting
9:25	Adjourn

City Staff Update: 3/14/16
Prepared by Lisa Goldberg

1. The Alexandria Earth Day 2016 Committee met on March 2 and 16. Natasha Andersen chaired these meetings. The event is scheduled for April 30 at the Lenny Harris Memorial Fields at Braddock Park 1101 Mt. Vernon Ave. (This is adjacent to the George Washington Middle School.)
 - a. Four nominees were submitted for the Ellen Pickering Award, the selection process is underway.
 - b. Posters are now available for Earth Day Committee and Environmental Policy Commission member distribution.
 - c. A TC Williams student is producing a promotional video in conjunction with a TCW film class.
 - d. The Earth Day proclamation will be announced at both the April 12 Council Meeting and at the Earth Day event.
2. The Alexandria Strategic Plan process is underway. The FY 2017-2022 City Strategic Plan is an opportunity for City Council to work with members of the community and Boards and Commissions to establish the City's strategic direction and priorities for the coming years. Throughout this planning process, the community will have several opportunities to participate and provide feedback in-person and online:
 - a. The first opportunity was a Visioning Meeting that took place on March 14 in the T.C. Williams High School.
 - b. AlexEngage –An opportunity to provide input online is available through Sunday, March 20.
 - c. Comments received will inform the development of the draft FY 2017-2022 City Strategic Plan to be presented to Council in the fall of 2016.Additional information will be distributed through eNews and posted to the project website at <http://www.alexandriava.gov/StrategicPlan>.
3. City Staff is finalizing the 2015 Eco-City Update report. The update will be presented at Earth Day and the April 12, 2016 Council Meeting.
4. City staff and its remediation contractor are moving forward with the upland soil gas and groundwater monitoring and community relations plans for the Oronoco outfall remediation project. The Virginia Department of Environmental Quality approved the sampling plans. A schedule for work will be announced following a staff meeting with the property manager for the Lees St Square/Dalton Wharf office condominium association.
5. City staff is preparing a Request for Proposals to evaluate the feasibility and outline specific needs and costs associated with incorporating some key EcoDistrict elements into The Old Town North Small Area Plan.
6. City staff met with an entrepreneur class that is planning to undertake a plastics recycling campaign and an overall study of recycling at TC Williams High School in preparation for an April class visit by a representative from the Jane Goodall Foundation.

7. Jesse Maines is the City's Division Chief of Stormwater Management, a new position approved in the FY16 Budget with a focus on stormwater management, water quality and implementing a stormwater utility.
8. A meeting is scheduled for March 23, 2016 to address Dominion Virginia Power's (DVP) request to construct a new [230-kilovolt \(kV\) underground transmission line](#) between DVP's Glebe Substation on Four Mile Run in Arlington County and Pepco's Potomac River Substation at the NRG Site where the power plant was recently shut down. City Council established an Underground Transmission Line and Substation Working Group in June 2014 to assess the quality of life, economic impacts, electrical reliability and environmental and transportation impacts associated with the proposed project and to make recommendations to staff, the City Manager and City Council.

City of Alexandria, Virginia

Progress Report on Eco-City and Environmental Action Plan 2030

City Council Legislative Session
April 12, 2016



Eco-CITY  **ALEXANDRIA**

Agenda

- Annual check-in with City Council
- Background
- Key Environmental Indicators
- 2015 Top Environmental Achievements
- Confirm environmental priorities with City Council moving forward

Eco-City Alexandria – Partnership Between the City, Alexandria Environmental Policy Commission, Virginia Tech and the Community



2007: Eco-City project started
2008: Eco-City Charter
2009: Environmental Action Plan 2030



Key Environmental Indicators

- Solid waste recycling remains high at **48.8%**
- Air quality significantly improved with **0** red code days and **5** orange code days in 2015
- City's current percent tree canopy has been determined to be **34%**
- Number of open space protected now stands at **104.3** acres compared to target of 100 acres

2015 Top Environmental Achievements

Solid waste recycling rate for 2014 held steady at **48%**

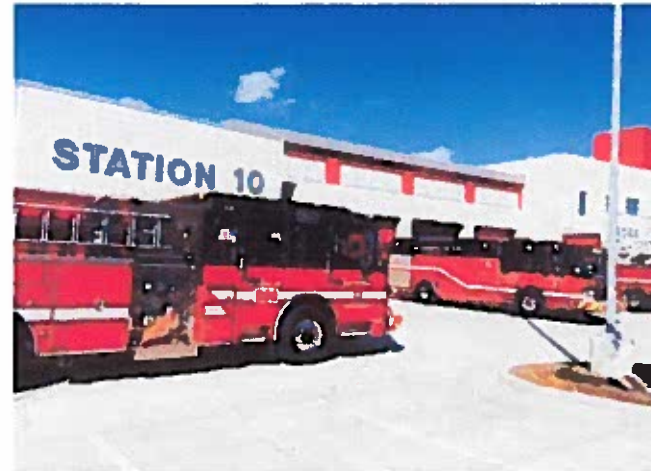


City launched successful SolarizeAlexandria program

- Over **250** Alexandria residents participated
- 10 residents have signed contracts

2015 Top Environmental Achievements

- Fire Station 210 achieved **LEED Silver** certification
- **19%** of City's electricity use generated by renewable sources



2015 Top Environmental Achievements

- **34%** of the City's surface area is covered by tree canopy
- City planted **454** new trees
- City expanded its successful **Invasive Plant Control Program**



- **AlexRenew** dedicated innovative athletic field to Alexandria

2015 Top Environmental Achievements



- City replaced over **2,500** traffic lights with energy-efficient LED
 - Annual traffic signal energy cost reduced by ~\$60,000

ATC purchased **21** hybrid-electric buses in 2015

- 46 in total (54% of bus fleet)



Staff Priorities

- Develop plan to implement **stormwater utility** and meet water quality targets
- Develop and implement plan for addressing **combined sewer** overflows
- Continue to move forward with **flood mitigation** plan for waterfront

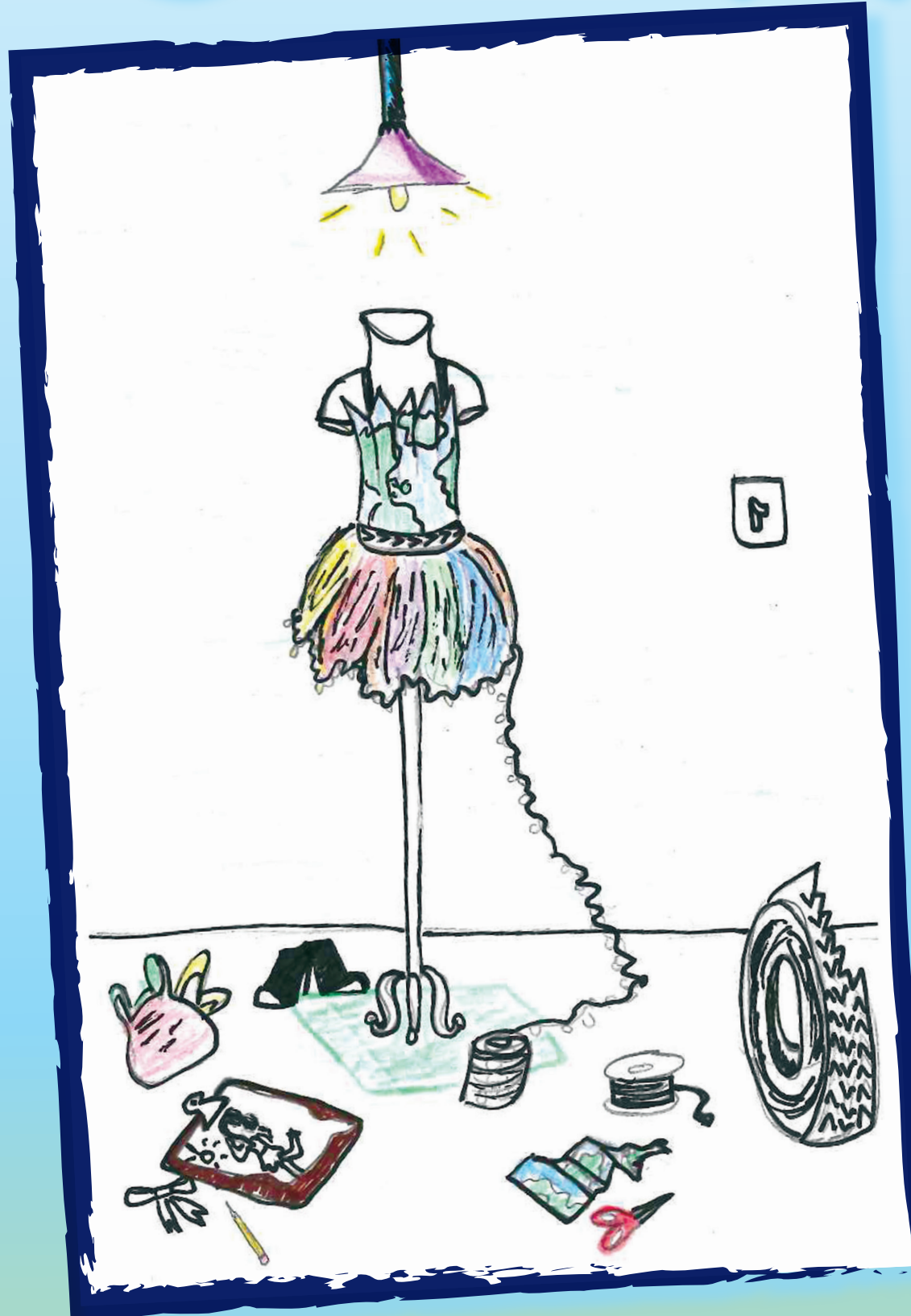
Staff Priorities

- Continue to participate in **COG regional sustainability** programs and initiatives
- Continue to proceed with **Potomac Yard Metro Station** project
- Working to pilot **Eco-District** concept as part of the Old Town North Small Area Plan
- Working with the EPC to revise key environmental indicators

Questions?

Thank you!

Choose to Reuse *Your Choices Matter*



Alexandria Earth Day

SATURDAY, APRIL 30, 2016

LENNY HARRIS MEMORIAL FIELDS AT
BRADDOCK PARK, 1005 MT. VERNON AVENUE
10 A.M. — 2 P.M.

Rain Site: George Washington Middle School, 1005 Mt. Vernon Avenue

UPCYCLING SHOWCASE • EXHIBITS • DEMONSTRATIONS • FOOD • FUN

www.alexandriava.gov/Earthday • www.alexandriava.gov • Events Hotline: 703.746.5592
facebook.com/RPCAalexandriaVA • twitter.com/RPCA_AlexVA



Eco-CITY  ALEXANDRIA

Poster Sponsored By: American Advertising Distributors of Northern Virginia



Alexandria, VA Earth Day Stormwater Survey 2015

Total Survey Number: 33

1. What do you think is the biggest source of water pollution in Alexandria?

Fertilizer: 24%

Motor Oil: 3%

Pet Waste: 18%

Sediment: 9%

Trash: 30%

Other: 15%

All of the above

Human waste after rain

Stormwater runoff

Non-point source pollution

2. Does stormwater runoff go into a treatment plant?

Yes: 48%

No: 52%

3. How often do you fertilize your lawn?

Once per year: 24%

Twice per year: 6%

Three or more times per year: 3%

I don't fertilize: 33%

I don't have a lawn: 33%

4. Where do you wash your car?

In my driveway: 36%

In the grass: 3%

In the street/parking lot: 0%

At the carwash: 58%

I don't have a car: 3%

5. Did you know that it is illegal to dump anything down a storm drain?

Yes: 88%

No: 12%

6. What do you do with used cooking grease and oil?

Pour it down the sink: 18%

Throw it in the trash after it cools: 58%

Pour it outside: 3%

Other: 21%

I don't use them and discard

Compost

Give to birds with seeds

7. Do you have any suggestions or programs you would like to see the City implement related to water quality?

- Teach children how don't waste water
- More events like this [Earth Day] to provide education and options
- I would support more water conservation programs
- Put trash cans in the back instead of the front
- Sewer gates
- Include an information bulletin about planting perennial plants (i.e. hazelnut, berries, etc.) in the storm water collection areas around town. Increases wildlife, enables the development of a food production site, etc. Billy VanCuren. If there is any interest I would like to know - 580-574-6678
- Free water testing
- Promote rain barrels, even (esp.) for condo living. We will need them everywhere someday.
- Possible water recycling from waste water to drinking water
- Affordable way stop sewage won't go into river. Rebuild (add) sustainable ways to divert "sewage overflow".
- Better use of grey water
- Yes - activate dog walkers to pick up trash/recycling on walk routes
- Put trash cans/recycling in parks, ball fields, etc. Make sure animals cannot put trash out. They are doing this by Beatley Library and other locations. Birds/squirrels pull the trash out.

- The growing of people from around the world with not information about water. Needs more education on the subject.

ECO-CITY  **ALEXANDRIA**

From: Alexandria eNews <conf-293777890@everbridge.net>
Sent: Monday, April 18, 2016 5:48 PM
To:
Subject: News Release -- City to Host 23rd Annual Alexandria Earth Day on April 30

You are subscribed to the City of Alexandria's free eNews service. Replies to this message will not be received. For correspondence, please use the contact information in the body of the message.

City of Alexandria to Host 23rd Annual Alexandria Earth Day on April 30

Choose To Reuse -- Your Choices Matter

For Immediate Release: April 18, 2016

On Saturday, April 30, join the City of Alexandria for the 23rd Annual Alexandria Earth Day and Arbor Day celebration. This year's event is at a new location: the Lenny Harris Memorial Fields at Braddock Park, 1005 Mount Vernon Ave., adjacent to the George Washington Middle School. The celebration begins at 10 a.m. and will run until 2 p.m. Admission is free; food and beverages will be sold.

This family-friendly event includes the Sixth Annual Upcycling Showcase, featuring students from Alexandria City Public Schools who will show their upcycling creations based on the theme, "*Choose to Reuse—Your Choices Matter.*"

Other activities include:

- "Tent Talks," featuring topics such as recycling in Alexandria; choosing native plants in Alexandria; oyster restoration; and live animal exhibits
- The Eighth Annual Ellen Pickering Award presentation
- Arbor Day Tree Planting
- Live animal exhibits
- Live music by local artists
- Environmental education exhibitors and plant giveaways

For a complete list of activities, visit www.alexandriava.gov/Earthday.

Alexandria Earth Day is based on the need to promote education and lead us all to a green and sustainable future, in keeping with the goals of the Eco-City Alexandria Initiative. The Alexandria Earth Day Committee has committed to making this event a zero-waste and carbon neutral.

The public is encouraged to take public transit, walk or bike to the event.

- Bicyclists may visit alexandriava.gov/Localmotion for the City's Bikeways Map, which features the City's best on-street and off-road bikeways.
- For DASH bus route and schedule information, call 703.370.DASH or visit www.dashbus.com.
- For Metrorail and Metrobus schedule information, call 202.637.7000 or visit www.wmata.com.

This year, DASH will be offering free rides for the event on the DASH AT8 bus from 9:30 a.m. to 3 p.m. on April 30. Visit alexandriava.gov/Earthday for a printable pass to ride DASH to the event.

Parking is available in the George Washington Middle School parking lot, adjacent to the Lenny Harris Memorial Fields.

In case of inclement weather, the event will be relocated to the George Washington Middle School, 1005 Mount Vernon Avenue.

For more information, visit www.alexandriava.gov/Earthday or call the Special Events Hotline at 703.746.5592.

The City of Alexandria is committed to compliance with the City's Human Rights Code and the Americans with Disabilities Act. To request a reasonable accommodation or to request materials in an alternative format, call Cheryl Lawrence at 703.746.5419 (VA Relay711), or e-mail cheryl.lawrence@alexandriava.gov.

For media inquiries, contact Andrea Blackford, Senior Communications Officer, at andrea.blackford@alexandriava.gov or 703.746.3959.

#

This news release is available at www.alexandriava.gov/91232.

To change your subscription choices, [click here to login](#). To request removal of your account, email enews@alexandriava.gov.

Appendix C – Minimum Control Measure #3

1. Call.Click.Connect web-based form capture
2. Permit Plan Program capture
3. Cityworks Program capture
4. City's Household Hazardous Waste webpage
5. Household Hazardous Waste & Electronics Recycling Program Brochure
6. State Permitted Discharges Map
7. State Permitted Discharges Table
8. Robinson Terminal North – Conditions regarding cooking residue
9. Permit Year 3 Outfall Inspections Table

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[Play](#)
[Services](#)
[Business](#)
[Government](#)
[Projects & Plans](#)
[Events](#)
[I want to...](#)

Call-Click-Connect

The City's online customer service system allows customers to submit service requests, report problems, search for information, or find the right contact to call for various issues and topics of interests.

Fire, Police, or Medical Emergency? Call 9-1-1 now!

Staff usually respond to requests within 5 business days. For faster response, please call 703.746.HELP (703.746.4357) during [our office hours](#).

[Search](#)
[Categories](#)
[Departments](#)
[A-Z](#)
[Check Status](#)
[Current Requests](#)
[My Requests](#)

Find available information and service request types by keyword.

[Group by category](#)

Having trouble finding what you need? Call us at **703.746.HELP** (703.746.4357) or [tell us what you need](#).

[Categories](#)

Browse through predefined categories to find related information and service request types.

[Departments](#)

Browse for information and service request types by the associated City department.

[A-Z](#)

Tidemark Advantage [Joni Calmbacher - JMC]

File Edit Options Window Help

Exit

New

Open

Task List

GDE

GIS

Query By Example

Case Type

Environmental Quality Complaints

Case Status:

Status	Case Number	Address	Name
REC	EQC2010-00057	1465B N VAN DORN ST	KREHNOVI CHRISTINA
REC	EQC2010-00058	1465A N VAN DORN ST	TUCKER LAURA K CARROLL BRENDEN P
REC	EQC2010-00067	307 YOAKUM PY 307	KRAMER DOROTHY J OR HENRY F
REC	EQC2010-00107	322 HOPKINS CT	HOUSING AUTHORITY ALEXANDRIA REDEVE
REC	EQC2010-00111	2251 EISENHOWER AV LOBBY	CARLYLE PLACE ASSOCIATES LLC
REC	EQC2010-00112	218 ELLSWORTH ST	YEARDON MELISSA A SPENCER LANCE H
REC	EQC2010-00113	5700 SANGER AV	CITY OF ALEXANDRIA
REC	EQC2010-00127	1018 N HENRY ST	YATES JEFFREY L OR MARY I
REC	EQC2010-00128	1110 COLONIAL AV	DRAKEFORD CATHERINE R OR THOMAS H
REC	EQC2010-00129	2408 DAVIS AV	TIMMONS JOHN W OR PAULA PLEAS
REC	EQC2010-00130	112 ROBERT'S CT	KIM LAWRENCE C
REC	EQC2010-00131	1008 HARRISON CR	KHAN OMER SHARIQ
REC	EQC2010-00133	801 N FAIRFAX ST	WATERFRONT INVESTMENT GROUP LLC
REC	EQC2010-00144	917 N ALFRED ST	HOUSING AUTHORITY ALEXANDRIA REDEVE
REC	EQC2011-00008	1400 N ROYAL ST	POTOMAC ELECTRIC POWER COMPANY
REC	EQC2011-00012	2301 EISENHOWER AV	COMMONWEALTH OF VIRGINIA

Clear Query

Execute Query

Select

Done

Help

Export

Closed Water Quality Service Requests (Group)							
<input type="checkbox"/>	Id	Date Initiated	Submit To	Dispatch To	Address	Initiated By	Pj Complete Date
<input type="checkbox"/>	99233	6/15/2016 6:35 PM	ENVQTYWATER		3558 MARTHA CUSTIS DR	API, SR	6/17/2016 12:00 AM
<input type="checkbox"/>	99232	6/15/2016 6:33 PM	ENVQTYWATER		3558 MARTHA CUSTIS DR	API, SR	6/17/2016 12:00 AM
<input type="checkbox"/>	98313	6/3/2016 5:20 PM	ENVQTYWATER	GREDIAME, WISDOM	5300 Block of Holmes Run Drive	GREDIAME, WISDOM	6/7/2016 12:00 AM
<input type="checkbox"/>	98312	6/3/2016 5:08 PM	ENVQTYWATER		Holmes Run Parkway and Chambliss	GREDIAME, WISDOM	6/7/2016 12:00 AM
<input type="checkbox"/>	97362	5/20/2016 4:21 PM	ENVQTYWATER	GREDIAME, WISDOM	2758 Duke St	GREDIAME, WISDOM	5/24/2016 12:00 AM
<input type="checkbox"/>	96598	5/11/2016 1:11 PM	ENVQTYWATER	GREDIAME, WISDOM	5200 Eisenhower Ave	GREDIAME, WISDOM	5/13/2016 12:00 AM
<input type="checkbox"/>	93889	4/8/2016 1:45 PM	ENVQTYWATER	GREDIAME, WISDOM	Dogwood and Valley Drive, Close to E Timber Branch on Braddock	GREDIAME, WISDOM	4/12/2016 12:00 AM
<input type="checkbox"/>	93580	4/5/2016 11:02 AM	ENVQTYWATER	GREDIAME, WISDOM	N Morgan and Beauregard Intersection	GREDIAME, WISDOM	4/7/2016 12:00 AM
<input type="checkbox"/>	93364	4/1/2016 3:39 PM	ENVQTYWATER	GREDIAME, WISDOM	4519 HOLMES RUN PKWY	DEGROOT, SARA	4/5/2016 12:00 AM
<input type="checkbox"/>	92763	3/24/2016 10:24 AM	ENVQTYWATER		1250 S WASHINGTON ST	API, SR	3/28/2016 12:00 AM
<input type="checkbox"/>	92627	3/22/2016 2:19 PM	ENVQTYWATER		Business Center Drive	GREDIAME, WISDOM	3/24/2016 12:00 AM
<input type="checkbox"/>	91895	3/8/2016 10:01 AM	ENVQTYWATER	GREDIAME, WISDOM	100 S Dove St	GREDIAME, WISDOM	3/10/2016 12:00 AM
<input type="checkbox"/>	91388	3/7/2016 1:14 PM	ENVQTYWATER		3101 EISENHOWER AV	BROWN, SARAH M	3/9/2016 12:00 AM
<input type="checkbox"/>	91072	3/2/2016 11:57 AM	ENVQTYWATER	GREDIAME, WISDOM	100 S Dove St	GREDIAME, WISDOM	3/4/2016 12:00 AM
<input type="checkbox"/>	90558	2/25/2016 10:24 AM	ENVQTYWATER	GREDIAME, WISDOM	Monticello Park	GREDIAME, WISDOM	2/29/2016 12:00 AM
<input type="checkbox"/>	89669	2/5/2016 3:51 PM	ENVQTYWATER	DEGROOT, SARA	3107 OLD DOMINION BLVD	DEGROOT, SARA	2/9/2016 12:00 AM
<input type="checkbox"/>	87374	1/11/2016 2:26 PM	ENVQTYWATER	DEGROOT, SARA	107 E LURAY AVE	API, SR	1/13/2016 12:00 AM
<input type="checkbox"/>	86063	12/14/2015 12:24 PM	ENVQTYWATER	GOLDBERG, USA	118 1/2 E REED AVE	API, SR	12/21/2015 12:00 AM
<input type="checkbox"/>	85973	12/11/2015 11:29 AM	ENVQTYWATER	DEGROOT, SARA	500 HOLLAND LN	DEGROOT, SARA	12/15/2015 12:00 AM
<input type="checkbox"/>	85743	12/8/2015 12:54 PM	ENVQTYWATER	CLAYTOR, DEREK	803 E TIMBER BRANCH PY	RAHAL, BRIAN	12/18/2015 12:00 AM
<input type="checkbox"/>	85436	12/4/2015 10:37 AM	ENVQTYWATER	GREDIAME, WISDOM	1204 Russell Road	GREDIAME, WISDOM	12/8/2015 12:00 AM
<input type="checkbox"/>	84967	11/24/2015 10:09 AM	ENVQTYWATER	DEGROOT, SARA	2710 HOLLY ST	RAHAL, BRIAN	12/11/2015 12:00 AM
<input type="checkbox"/>	84244	11/10/2015 11:35 AM	ENVQTYWATER	DEGROOT, SARA	3804 EDISON ST	DEGROOT, SARA	11/12/2015 12:00 AM
<input type="checkbox"/>	84082	11/7/2015 2:02 PM	ENVQTYWATER	DEGROOT, SARA	304 BEVERLY DR	API, SR	11/11/2015 12:00 AM
<input type="checkbox"/>	84079	11/6/2015 9:04 PM	ENVQTYWATER	GREDIAME, WISDOM	4347 LOYOLA AV	DEGROOT, SARA	11/10/2015 12:00 AM
<input type="checkbox"/>	84052	11/6/2015 10:05 AM	ENVQTYWATER	DEGROOT, SARA	5347 HOLMES RUN FWY	API, SR	11/10/2015 12:00 AM
<input type="checkbox"/>	83773	11/2/2015 9:46 AM	ENVQTYWATER	GREDIAME, WISDOM	3223 DUKE ST	RAHAL, BRIAN	11/4/2015 12:00 AM
<input type="checkbox"/>	83499	10/27/2015 8:48 AM	CLAYTOR, DEREK		1220 BEAUREGARD ST	RAHAL, BRIAN	10/29/2015 12:00 AM
<input type="checkbox"/>	82629	10/8/2015 4:15 PM	ENVQTYWATER	DEGROOT, SARA	201 W MT IDA	DEGROOT, SARA	10/13/2015 12:00 AM
<input type="checkbox"/>	82563	10/7/2015 6:53 PM	ENVQTYWATER	DEGROOT, SARA	104 INGLE PL	API, SR	10/9/2015 12:00 AM
<input type="checkbox"/>	81577	8/21/2015 5:34 PM	ENVQTYWATER	DEGROOT, SARA	1250 S WASHINGTON ST	DEGROOT, SARA	8/23/2015 12:00 AM

Service Request Description: Water Quality - Create, River & Storm Water Request ID: 99232 Category: TES Sanitary and Storm Status: CLOSED Initiated By: API, SR Date: 6/15/2016 6:33 PM Investigation: <input checked="" type="checkbox"/> Date: 6/15/2016 12:30 PM Emergency: <input type="checkbox"/> WO Needed: <input type="checkbox"/> Submit To: ENVQTYWATER Date: 6/15/2016 6:33 PM Dispatch To: Date: Project Name: Pj. Comp. Date: 6/17/2016 12:00 AM Project Tree Cancel Reason: Cancelled By: Date: 6/15/2016 12:30 PM New Comments: Send Existing By API, SR: 6/15/2016 6:33:31 PM Comments: Problem location map By API, SR: 6/15/2016 6:33:31 PM Customer provided attachment: "MC2.JPG" By API, SR: 6/15/2016 6:33:31 PM Please provide a description of the problem "Sewer slurry not cleaned up" Resolution: Complete Labor: 0		Incident Information Address: 3558 MARTHA CUSTIS DR Apt #: City: Alexandria State: Zip Code: Landmark: Shop: Map Page: Location: Details: Please provide a description of this problem "Sewer slurry not cleaned up" Please provide specific information regarding the location of this problem "Problem location map" X: 11.886,343.20 Y: 6.991,083.08 Callers <table> <tr> <th>Last Name</th> <th>First Name</th> <th>M.I.</th> <th>Call Time</th> <th>Caller Type</th> <th>Comment</th> </tr> <tr> <td>MC DONNELL</td> <td>JENNIFER</td> <td></td> <td>6/15/2016 6:33:33 PM</td> <td></td> <td></td> </tr> </table> New Request From Caller Related Work Activities Inspections Add: Create Work Orders Add: Create Attachments Add attachments... Remove all attachments Drag and drop files here to attach them. Permit Create Existing Requests with the Same Problem Code Search		Last Name	First Name	M.I.	Call Time	Caller Type	Comment	MC DONNELL	JENNIFER		6/15/2016 6:33:33 PM		
Last Name	First Name	M.I.	Call Time	Caller Type	Comment										
MC DONNELL	JENNIFER		6/15/2016 6:33:33 PM												

Household Hazardous Waste

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https://www.alexandriava.gov/tes/solidwaste/info/default.aspx?id=19206

🔍

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Location & Hours

• [Acceptable and Unacceptable Hazardous Waste & Electronic Items](#)

• [Fluorescent Lightbulbs \(CFL's\) and Mercury – Use, Breakage Cleanup & Disposal](#)

• [Material Preparation](#)

• [Eligible Participants](#)

• [Hazardous Waste and Electronic Disposal / Recycling Information for Businesses](#)

• [Less Toxic & Reuse Opportunities](#)

• [Additional Resources](#)

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• [Transportation & Environmental Services](#)

• [Resource Recovery](#)

• [Refuse Collection](#)

• [Street Cleaning](#)

• [Resource Recovery Holiday Collection Calendar](#)

• [Recycling](#)

• [Recycling at Home](#)

• [Recycling at Work](#)

• [Recycling at Condos, Apartments & HOAs](#)

• [Recycling Drop-Off Centers](#)

• [Recycling on the Go](#)

• [Reduce, Reuse & Other Recycling Opportunities](#)

• [Solid Waste Hauler Permitting and Reporting](#)

It is our responsibility to properly use, store, and dispose of hazardous waste. All household hazardous waste is disposed of by a licensed hazardous waste disposal firm.

Household Hazardous Waste & Electronics Recycling Center Location & Hours

Location: [3224 Colvin Street](#) (click for map)

• **From the West:** Travel east on Duke Street and turn right onto S. Quaker Lane. Then take the first left onto Colvin Street. You will see the site on your right.

• **From the East:** Travel west on Duke Street and turn left onto S. Quaker Lane. Then take the first left onto Colvin Street. You will see the site on your right.

• **From the North:** Take Braddock Road, King Street or Seminary/Janneys Lane to N. Quaker Lane. Travel south on N. Quaker Lane to Duke Street; turn left. Travel east on Duke Street to S. Quaker Lane (an immediate right off of Duke St); turn right. Then take the first left onto Colvin Street. You will see the site on your right.

HOURS OF OPERATION

OPEN	CLOSED
<div>Monday</div> <div>7:30am - 3:30 pm</div>	<div>Tuesday, Wednesday</div>
<div>Saturday</div> <div>7:30 am - 3:30 pm</div>	<div>Thursday, Friday, Sunday</div>

Acceptable and Unacceptable Hazardous Waste & Electronic Items

Acceptable Household Hazardous Waste Items

• Antifreeze

• Battery Acid

• Gasoline

• Motor oil

• Auto Cleaning Products

• Car Batteries

• [Fluorescent Light Bulbs](#)

• Oil-based Paints*

• Lacquers

• Spray can Paint

• Thinners

• Fire Extinguishers

• Household Cleaning Products

• Flammable Waxes & Abrasives

• Driveway Sealer

• Household Batteries**

• Drain Cleaner

• Flammable Caulks & Adhesives

• Varnishes

• Mineral Spirits

• [Mercury thermostats & thermometers](#)

• Lawn Care Products

• Garden Products

• Herbicides

• Pesticides

• Ant Bait or Traps

• Rodent Control Products

• Insect Spray Cans

• Pet Supplies

• Photographic Chemicals

↑

Household Hazardous Waste & Electronics Collection Program

Many everyday products contain chemicals that are potentially hazardous to our health and the environment. It is our responsibility to properly use, store, and dispose of hazardous items. Make sure to:

- Carefully read labels and follow directions.
- Do not mix chemical substances – even similar products.
- Use only in well-ventilated areas.
- Secure lids tightly; Store in a dry, cool place away from heat, children & pets.
- Properly dispose of hazardous waste.

Eligible Participants:

City of Alexandria Residents ONLY
Businesses - visit web site for more information

Acceptable materials:

- Gasoline, Antifreeze & Motor Oil
- Battery Acid & Car Batteries
- Oil-Based & Spray Can Paint
- Flammable Caulks & Adhesives
- Lacquers, Varnishes & Thinners
- Mineral Spirits
- Fire Extinguishers
- Household/Auto Cleaning Products
- Flammable Waxes & Abrasives
- Photographic Chemicals & Products
- Lawn Care & Garden Products
- Rodent, Insect & Ant Repellent Products
- Mercury & Fluorescent Light Bulbs

Unacceptable materials:

Explosives, Ammunition, Biological Waste, Radioactive Materials, Unlabeled or Unknown Substances

Acceptable Electronic Items

- Cell phones, Blackberries & PDA's
- Calculators
- CD-ROM/DVD drives
- Memory & Circuit boards
- Computers (PC's)/Laptops/Notebooks
- Monitors (LCD & CRT)
- All computer peripherals: Keyboards, Mice, Cables & external Drives.
- Fax Machines & Modems
- Digital Cameras
- All rechargeable and button Batteries (Alkaline batteries can be disposed of as trash in curbside collection)
- Desktop printers (laser & ink jet) & their cartridges.
- Desktop scanners & copiers
- Stereos and speakers
- Uninterrupted Power Supplies (UPS)
- Video & Audio Equipment
- Wire/cables/extension cords
- TV's (CRT, LCD, Plasma, Rear Proj.)
- Storage Media and their cases: (DVDs, CDs, VHS, ZIP, floppy disks, etc.)
- Small kitchen appliances & microwaves
- Refrigerators and Freezers
- A/C units, Dehumidifiers or other items containing refrigerant



Household Hazardous Waste & Electronics Recycling Program



3224 Colvin Street
Alexandria, VA 22314

Hours of Operation
Monday & Saturday (Except holidays)
7:30 a.m. to 3:30 p.m.



T&ES - Solid Waste Division
(703) 746-4410
alexandriava.gov/recycling

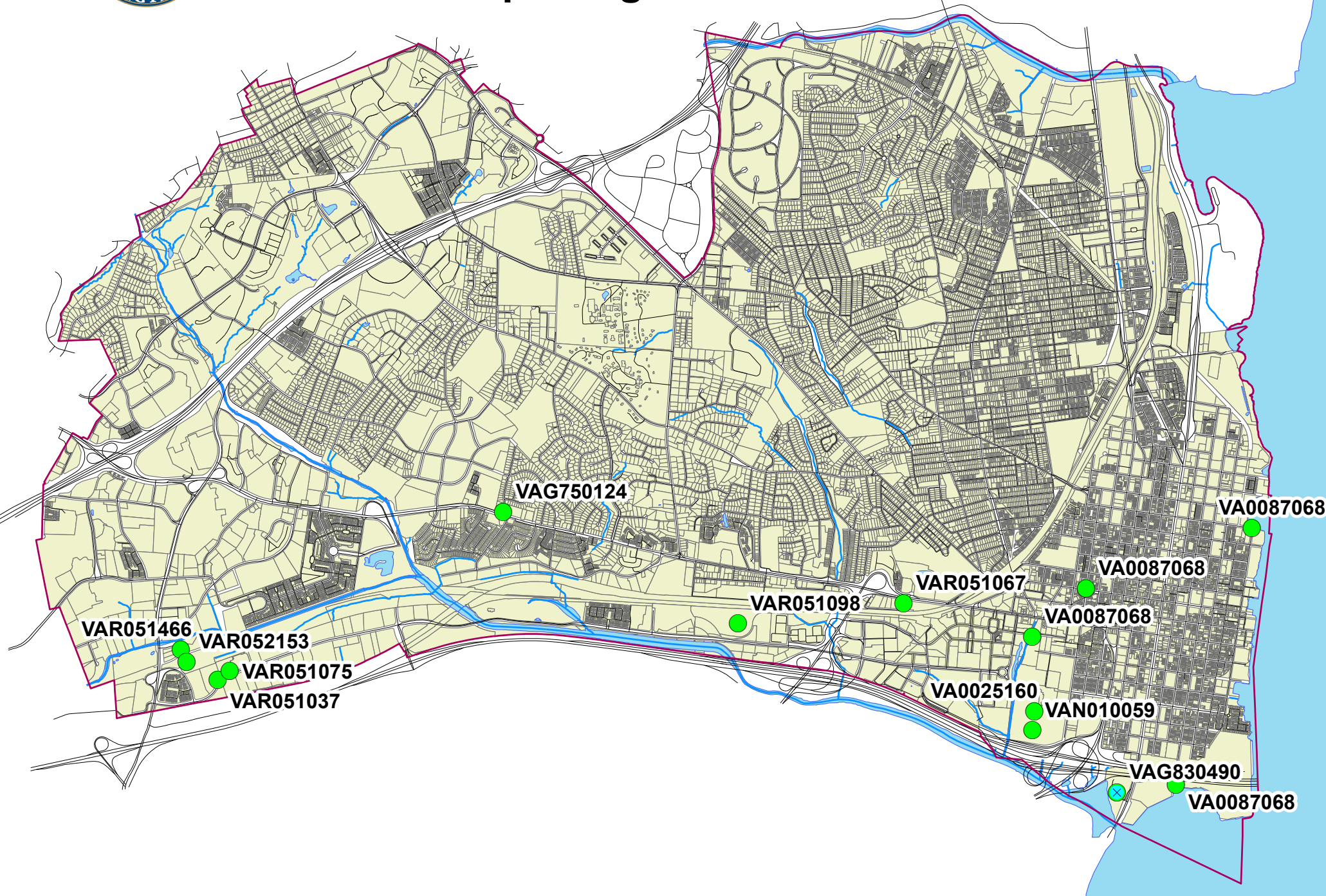
Eco-CITY  ALEXANDRIA

Hazardous Waste - Less Toxic Option and Safe Disposal

Hazardous Product	Hazardous Component	Less Toxic Option	Proper Disposal
Stains/Finishes	Glycols, ethers, ketones, minerals spirits, toluene, xylene, other volatile organic compounds	Water-based finishes	Store in screw top container. Save for household hazardous waste collection.
Oil-Based Paints	Alcohol, acetone, esters, ketones, petroleum distillates, other volatile compounds	Use water-based paints*	Share leftovers with friends or neighbors; save for household hazardous waste collection.
Used Oil	Hydrocarbon, heavy metals	none; use recycled oil	Can be recycled. Contact oil collection center or service station; save for household hazardous waste collection.
Bleach Cleaners	Lye, hydrogen peroxide, sodium or calcium hypochlorite	Baking soda or borax	In well-ventilated area, use up as intended. Never mix with ammonia.
Ammonia-Based Cleaners	Ammonia, ethanol	White vinegar, lemon juice	In well-ventilated area, use up as intended. Never mix with chlorine bleach.
Drain Opener	Lye, sodium hypochlorite	Prevent blockage with biological clog preventers; remove clogs with plunger or plumber's "snake"	Save for household hazardous waste collection.
Oven Cleaner	Lye, ammonia	Catch drips with foil or cookie sheets; for cleaning use baking soda, water, scouring pad	In well-ventilated area, use up as intended. Save for household hazardous waste collection.
Pesticides	Almost all pesticides are hazardous. Call US EPA for a list of banned pesticides	Remove food source, use traps and baits, or biological controls	Save for household hazardous waste collection.
Paint Thinners	Alcohol, acetone, esters, ketones, petroleum distillates, other volatile organic compounds	Water in water based paints	Store in screw top container, allow paint solids to settle to bottom & pour off clear thinner to use again. Save remainder for household hazardous waste collection.
*Water-based, Latex paints	Not considered hazardous		Share leftovers with friends or neighbors; add kitty litter or saw dust to left over and allow the paint can to dry out before throwing in the trash. Can be brought to household hazardous waste collection.



City of Alexandria Permitted Discharges MS4 Reporting Year 2015-2016



INDIVIDUAL PERMITS

Permit No	Expiration Date	Classification	Region	Facility Name	Location Address 1	Location City	Location State	Location Zip5	County Code	County Name
VA0087068	8/22/2018	Active	NVRO	Alexandria Combined Sewer System	Various locations in the City of Alexandria	Alexandria	VA	22300	510	Alexandria City
VA0025160	2/29/2020	Active	NVRO	Alexandria Renew Enterprises WWTP	1500 Eisenhower Ave	Alexandria	VA	22314	510	Alexandria City

GENERAL PERMITS

Permit No	Type	Classification	Region	Facility	Location Address 1	Location City	Location State	Location Zip5	County Code	County Name
VAG750124	Car Wash	Active	NVRO	Enterprise Rent A Car - Alexandria	4213 Duke St	Alexandria	VA	22304	510	Alexandria City
VAR051037	StormH2O	Active	NVRO	United Parcel Service - Alexandria	5601 Eisenhower Ave	Alexandria	VA	22304	510	Alexandria City
VAR051067	StormH2O	Active	NVRO	US Postal Service-Alexandria Aux Vehicle Maintenanc	2300 Duke St	Alexandria	VA	22314	510	Alexandria City
VAR051075	StormH2O	Active	NVRO	Covanta Alexandria Arlington Incorporated	5301 Eisenhower Ave	Alexandria	VA	22304	510	Alexandria City
VAR051098	StormH2O	Active	NVRO	WMATA - Alexandria Metro Rail Yard	3101 Eisenhower Ave	Alexandria	VA	22314	510	Alexandria City
VAR051466	StormH2O	Active	NVRO	Virginia Paving Company - Alexandria Plant	5601 Courtney Ave	Alexandria	VA	22304	510	Alexandria City
VAR052153	StormH2O	Active	NVRO	NS Thoroughbred Bulk Terminal Alexandria	1000 South Van Dorn St	Alexandria	VA	22304	510	Alexandria City
VAN010059	Nutrient	Active	NVRO	Alexandria Renew Enterprises WWTP	1500 Eisenhower Ave	Alexandria	VA	22314	510	Alexandria City
VAG830490	Petro	Active	NVRO	FP Alexandria Limited Liability Company	1199 S Washington St	Alexandria	VA	22314	510	Alexandria City

Z. AIR POLLUTION:

124. If fireplaces are utilized in the development, the Applicant is required to install gas fireplaces to reduce air pollution and odors. Animal screens must be installed on chimneys. (T&ES)
125. Kitchen equipment shall not be cleaned outside, nor shall any cooking residue be washed into any street, alley, or storm sewer. (T&ES)
126. No material may be disposed of by venting into the atmosphere. (T&ES)
127. No paint or coatings shall be applied outside the paint spray booth. (T&ES)
128. Control odors and any other air pollution sources resulting from operations at the site and prevent them from leaving the property or becoming a nuisance to neighboring properties, as determined by the Director of Transportation and Environmental Services. (T&ES)

AA. CONTRIBUTIONS:

129. The applicant shall contribute \$60,000 to the city prior to Final Site Plan release to install a bike share station on their site frontage or directly across the street from the project as part of a coordinated bike share program. If the City chooses to install the bikeshare station with City funds, the \$60,000 shall be used for operating expenses. In the event a bike share station cannot be located along the site frontage as planned, an alternate off-site location within a two block radius of the project may be selected. The bike share station shall be constructed within one year of the issuance of the last certificate of occupancy permit. (T&ES)

BB. WATERFRONT MANAGEMENT & MAINTENANCE:

130. The applicant, and/or its successors and assigns shall provide an annual contribution of \$100,000.00 to be adjusted annually by the Consumers Price Index (CPI) dedicated to the construction, operations, maintenance and programming of public improvements and activities within the Waterfront Plan area, or portion thereof, including the pier. The first annual contribution shall be provided to the City in a designated fund for Waterfront management and maintenance prior to approval of the final certificate of occupancy. (P&Z)
131. In the event a special service district, business improvement district or similar governance structure for the Waterfront Plan area or a portion thereof, is established by the City, the commercial and residential property owners shall be included in such district as directed by the City, to assist in financing the

Permit Year 3 - Outfall Inspections

FACILITYID	OUTFALL LOCATION	HUC	DATE	OBSERVATIONS AND FOLLOW UP ACTIVITIES
000090IO	219 Fort Williams Pkwy	PL26	4/25/2016	
000091IO	219 Ft Williams Parkway	PL26	4/25/2016	Partially submerged under water. Connects Strawberry Run east of Ft Williams Pkwy to the rest of the stream on the west
000092IO	501A Fort Williams Pkwy (not an outfall)	PL26	4/25/2016	Not an outfall
000093IO	135 Fort Williams Pkwy	PL26	4/25/2016	Green algae growth consistent with perennial flow.
000119IO			5/19/2016	Appears to be flowing from perennial stream
000120IO			5/19/2016	
000147IO	238 S Jenkins St, West of	PL26	5/10/2016	
000148IO	127 S Jordan St, West of	PL26	5/10/2016	149IO not outfall. Unable to locate 150IO
000151IO	4501 Wheeler Ave (Tarelton Park)	PL26	5/25/2016	
000152IO		PL26	5/25/2016	
000153IO	East of Intersection of Duke and Brenman Park Dr	PL26	5/10/2016	
000155IO	Cameron Pond SW Corner	PL25	5/10/2016	Outlet partially submerged in Pond. No sign of illicit discharge
000156IO	NW Corner of Cameron Pond	PL26	5/10/2016	More than half of outfall submerged in water. Outfall found in NW corner of pond in Ben Brenman Park
000159IO	4400 Vermont Ave, South of	PL26	5/25/2016	
000160IO	SW Side, Duke St Bridge	PL26	5/10/2016	Perennial flow
000162IO	SE Side, Duke St Bridge	PL26	5/10/2016	Observation was from distance as outfall wasn't easily accessible.
000207IO	NW Corner of W. Holmes Run Pkwy / Van Dorn Inter.	PL26	5/16/2016	Perennial flow. Green Algae present. Metal plate installed in path.
000209IO	Holmes Run Pkwy, End of N. Ripley	PL26	5/16/2016	Flow characteristic of perennial flow.
000210IO	5500 W. Holmes Run Pkwy	PL26	5/16/2016	Perennial flow observed
000211IO	5500 W. Holmes Run Pkwy	PL26	5/16/2016	Flow appears to be perennial
000234IO	Eisenhower Avenue South of Animal Shelter	PL26	4/18/2016	
000243IO	4001 Eisenhower Ave, South of Parking Lot	PL26	4/18/2016	Outfall pipe is partially filled with sediment
000244IO	4001 Eisenhower Ave, South of Parking Lot	PL26	4/14/2016	
000247IO	Cameron Across from Townes at Cameron Park	PL26	4/14/2016	
000248IO		PL26	4/15/2016	
000249IO	4001 Eisenhower Ave, South of	PL26	4/14/2016	
000250IO	4001 Eisenhower Ave, South of	PL26	4/14/2016	
000251IO	3825 Eisenhower Ave, South of	PL26	4/15/2016	
000257IO		PL26	4/18/2016	
000258IO		PL26	4/18/2016	Perennial flow.
000259IO	Intersect of Eisenhower Ave & Bluestone Rd, SE of	PL26	4/15/2016	
000263IO	East end of Holmes Run Pkwy	PL26	6/9/2016	
000272IO	Intersect of N Van Dorn & Duke St, N of in median	PL26	5/16/2016	
000273IO	Intersect of N Van Dorn & Duke St, N of in median	PL26	5/16/2016	

FACILITYID	OUTFALL LOCATION	HUC	DATE	OBSERVATIONS AND FOLLOW UP ACTIVITIES
000275IO	CANTERBURY SQUARE AND HOLMES RUN	PL26	6/9/2016	
000277IO	Beatley Library at N. Pickett, Old Holmes Run	PL26	5/10/2016	Partially submerged in water and sediment but no sign of illicit discharge.
000278IO	Beatley Library	PL26	5/10/2016	Outfall is filled partially with sediment.
000508IO	EAST SIDE OF WINGWALL FOR PIPED	PL26	4/19/2016	
000509IO	WEST SIDE OF WINGWALL, PIPED	PL26	4/19/2016	
000510IO	Across from Quincy and W Timber Branch	PL26	4/19/2016	
000511IO	808 W TIMBER BRANCH PKWY	PL26	4/19/2016	
000513IO	718 W TIMBER BRANCH PKWY	PL26	4/20/2016	
000514IO		PL26	4/20/2016	
000517IO		PL26	4/22/2016	
000518IO	6229 OAKLEY PL	PL26	4/22/2016	Outfall partially submerged in water but did not appear to be flowing.
000519IO	644 W TIMBER BRANCH PKWY	PL26	4/22/2016	
000520IO	636 W TIMBER BRANCH PKWY	PL26	4/22/2016	
000521IO	690 W TIMBER BRANCH PKWY	PL26	4/22/2016	Two additional outfalls were found near this one that were not captured in the database. One was flowing. Tested the
000522IO	801 E TIMBER BRANCH PKWY	PL26	4/20/2016	
000527IO	647 OAKLAND TR	PL26	4/22/2016	

Appendix D – Minimum Control Measure #4

1. E&SC Ordinance (excerpt)

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Sec. 5-4-1 - Definitions.

As used in this chapter, and pursuant to 9 VAC 25-840, the following terms shall have the meanings set forth below, unless the context requires a different meaning:

- (a) "Agreement in lieu of a plan" means a contract between the city and the owner which specifies conservation measures which must be implemented in the construction or modification of a single-family residence; this contract may be executed by the director in lieu of an erosion and sediment control plan.
- (b) "Alexandria Water Quality Volume" means the volume equal to the first one-half inch of runoff multiplied by the impervious surface of the land development project. This is separate and in addition to the state stormwater management water quality requirement.
- (c) "Applicant" shall mean any person submitting an erosion and sediment control plan or an agreement in lieu of a plan for approval or requesting the issuance of a permit, when required, authorizing land-disturbing activities to commence.
- (d) "Certified inspector" means an employee or agent of the city who (i) holds a certificate of competence from the soil and water conservation board in the area of project inspection or (ii) is enrolled in the board's training program for project inspection and successfully completes such program within one year after enrollment.
- (e) "Certified plan reviewer" means an employee or agent of a VESCP authority who (i) holds a certificate of competence from the board in the area of plan review, (ii) is enrolled in the board's training program for plan review and successfully completes such program within one year after enrollment, or (iii) is licensed as a professional engineer, architect, landscape architect, land surveyor pursuant to Article 1 (§ 54.1-400 et seq.) of Chapter 4 of Title 54.1, or professional soil scientist as defined in § 54.1-2200.
- (f) "Certified program administrator" means an employee or agent of a VESCP authority who (i) holds a certificate of competence from the board in the area of program administration or (ii) is enrolled in the board's training program for program administration and successfully completes such program within one year after enrollment.
- (g) "Director" means the director of transportation and environmental services, designee or duly authorized agent.
- (h) "Erosion and sediment control plan," "conservation plan" or "plan," shall mean a document containing material for the conservation of soil and water resources of an unit or group of units of land. It may include appropriate maps, an appropriate soil and water plan, inventory and management information with needed interpretations, and a record of decisions contributing to conservation treatments. The plan shall contain all major conservation decisions to assure that the entire unit or units of land will be so treated to achieve the conservation objectives.
- (i) "Erosion impact source area" shall mean an area of land not associated with current land-disturbing activity but subject to persistent erosion resulting in the delivery of sediment onto neighboring properties or into state waters. This definition shall not apply to any lot or parcel of land of 10,000 square feet or less used for residential purposes or to shorelines where the erosion results from wave action or other coastal processes.
- (j) "Land-disturbing activity" for the purposes of this chapter shall mean any land change which may result in soil erosion from water or wind and the movement of sediments into state waters or onto lands in the commonwealth, including, but not limited to, clearing, grading, excavating, transporting and filling of land.
- (k) "Natural channel design concepts" means the utilization of engineering analysis and fluvial geomorphic processes to create, rehabilitate, restore, or stabilize an open conveyance system for the purpose of creating or recreating a stream that conveys its bankfull storm event within its banks and allows larger flows to access its bankfull bench and its floodplain.

- (l) "Owner" shall mean the owner or owners of the freehold of the premises or of a lesser estate therein, a mortgagee or vendee in possession, an assignee of rents, a receiver, an executor, a trustee, a lessee or another person, firm or corporation in control of a property.
- (m) "Peak flow rate" means the maximum instantaneous flow from a given storm condition at a particular location.
- (n) "Permittee" shall mean the person to whom the permit authorizing land-disturbing activities is issued or the person who certifies that the approved erosion and sediment control plan will be followed.
- (o) "Person" for the purposes of this chapter shall mean any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, county, city, town, or other political subdivision of the commonwealth, interstate body, or other legal entity.
- (p) "Plan-approving authority" shall mean the department of transportation and environmental services which shall be responsible for determining the adequacy of a plan submitted for land-disturbing activities on a unit or group of units of lands and for approving plans.
- (q) "Runoff volume" means the volume of water that runs off the land development project from a prescribed storm event.
- (r) "State waters" shall mean all waters on the surface and or wholly or partially underground that is within or bordering the commonwealth or that is within the jurisdiction of the commonwealth. (Ord. No. 4489, 6/16/07, Sec. 1; Ord. No. 4957, 6/13/15, Sec. 1)

Sec. 5-4-1.1 - Approved erosion and sediment control plan required—construction of buildings.

Except as provided in section 5-4-5 of this code, it shall be unlawful for any persons to construct or erect any building or structure on any land within the city unless there is in force an approved erosion and sedimentation control plan issued under the provisions of this chapter. (Ord. No. 4489, 6/16/07, Sec. 1)

Sec. 5-4-2 - Same—enlargement of buildings.

Except as provided in section 5-4-5 of this code, it shall be unlawful for any person to alter any building or structure on any land within the city in such manner as to change the land area covered by the building or structure unless there is in force an approved erosion and sedimentation control plan issued under the provisions of this chapter. (Ord. No. 4489, 6/16/07, Sec. 1)

Sec. 5-4-3 - Same—change or disturb terrain.

- (a) Except as provided in section 5-4-5 of this code, it shall be unlawful for any person to clear, grade, excavate, fill, remove topsoil from or change the contour of any land in the city unless there is in force an approved erosion and sedimentation control plan issued under the provisions of this chapter.
- (b) Except as provided in section 5-4-5 of this code, it shall be unlawful for any person to remove or destroy trees, shrubs, grass, weeds, vegetation, ground cover or other plant life on any land in the city unless there is in force an approved erosion and sedimentation control plan issued under the provisions of this chapter (Ord. No. 4489, 6/16/07, Sec. 1)

Sec. 5-4-3.1 - Same—erosion impact source area.

Notwithstanding any contrary provision of this chapter, it shall be unlawful for any property owner to fail, neglect or refuse to implement an erosion and sediment control plan, approved by the director, and within such reasonable time as the director shall specify, for any land designated by the director as an erosion impact source area. (Ord. No. 4489, 6/16/07, Sec. 1; Ord. No. 4957, 6/13/15, Sec. 1)

Sec. 5-4-3.2 - Wetlands mitigation banks.

In accordance with the procedure set forth by § 62.1-44.15-51(E) of the Code of Virginia which is herein incorporated, any person engaging in the creation and operation of wetland mitigation banks in multiple jurisdictions, which have been approved and are operated in accordance with applicable federal and state guidance, laws, or regulations for the establishment, use, and operation of mitigation banks, pursuant to a permit issued by the Department of Environmental Quality, the Marine Resources Commission, or the U.S. Army Corps of Engineers, may, at the option of that person, file general erosion and sediment control specification for wetland mitigation banks annually with the Virginia Soil and Water Conservation Board (board) for review and approval consistent with guidelines established by the board. (Ord. No. 4489, 6/16/07, Sec. 1; Ord. No. 4957, 6/13/15, Sec. 1)

Sec. 5-4-4 - Compliance with approved plan.

- (a) It shall be unlawful for any person to construct, erect or alter any building or structure for which an approved erosion and sedimentation control plan is required by this chapter, except in accordance with the approved plan.
- (b) It shall be unlawful for any person to clear, grade, excavate, fill, remove topsoil from or change the contour of any land in the city for which an approved erosion and sedimentation control plan is required by this chapter except in accordance with the approved plan.
- (c) It shall be unlawful for any person to remove or destroy trees, shrubs, grass, weeds, vegetation, ground cover or other plant life on any land in the city for which an approved erosion and sedimentation control plan is required by this chapter except in accordance with the approved plan. (Ord. No. 4489, 6/16/07, Sec. 1)

Sec. 5-4-5 - Exceptions.

The provisions of this chapter shall not apply to any construction, reconstruction, repair or alteration of any building or structure when no land is disturbed and no trees, shrubs, grass or vegetation is destroyed or removed, nor to any of the following:

- (a) The construction or erection of any building or structure when the disturbed land area of the site is less than 2,500 square feet in size, provided there is no natural or man-made drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.
- (b) The alteration of any building or structure when the disturbed land area of the site will be less than 2,500 square feet, provided there is no natural or man-made drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.
- (c) The clearing, grading, excavating, filling or changing the contour of, or removing topsoil from, less than 2,500 square feet of land, provided there is no natural or man-made drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.
- (d) The clearing, grading, excavating, filling or changing the contour of, or removing topsoil from, less than 2,500 square feet of land, provided there is no natural or manmade drainage ditch, swale draining in excess of 2,500 square feet or storm sewer on the disturbed land, and further provided the disturbance of the land does not cause sedimentation on land outside the exterior boundaries of the land disturbed.
- (e) The removal or destruction of trees, shrubs, grass, weeds, vegetation, ground cover, or other plant life which cover less than 2,500 square feet of land, provided there is no natural or manmade drainage ditch, swale draining in excess of 2,500 square feet, or storm sewer on the disturbed land and no existing or proposed grade on the disturbed land exceeds 10 percent.
- (f) The planting, trimming, pruning or removal of trees, shrubs, grass, weeds, vegetation, ground cover or other plant life pursuant to chapter 2 of title 6 of this code.

- (g) The removal or destruction of trees, shrubs, grass, weeds, vegetation, ground cover or other plant life which is dead, poisonous or infected with disease or injurious insects or pests.
- (h) The gardening and care of lawns.
- (i) The removal or destruction of trees, shrubs, grass, weeds, vegetation, ground cover or other plant life from lots of less than 2,500 square feet on which there now exists a dwelling.
- (j) The exploration or drilling for oil and gas including the well site, roads, feeder lines and off-site disposal areas.
- (k) The repair or rebuilding of the tracts, right-of-way, bridges, communication facilities and other related structures and facilities of a railroad company.
- (l) Shore erosion control projects on tidal waters when the projects are approved by local wetlands boards, the Marine Resources Commission and/or the U.S. Army Corps of Engineers and located on tidal waters and within nonvegetated or vegetated wetlands as defined in Title 28.2 of the Code of Virginia. However, any associated land that is disturbed outside of this exempted area shall remain subject to the article and the regulations adopted pursuant thereto.
- (m) Emergency work to protect life, limb or property, and emergency repairs; provided, that, if the land-disturbing activity would have required an approved erosion and sediment control plan if the activity were not an emergency, the land area disturbed shall be shaped and stabilized in accordance with the requirements of the plan-approving authority.
- (n) Individual utility service connections.
- (o) Installation, maintenance, or repair of any underground public utility when such activity occurs on an existing hard surfaced road, street, or sidewalk provided the land-disturbing activity is confined to the area of the road, street, or sidewalk which is hard surfaced.
- (p) Septic tank lines or drainage fields unless included in an overall plan for land-disturbing activity relating to construction of the building to be served by the septic tank system.
- (q) Surface or deep mining.
- (r) Tilling, planting, or harvesting of agricultural, horticultural, or forest crops, or livestock feedlot operations; including engineering operations as follows: construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage and land irrigation. However, this exception shall not apply to harvesting of forest crops unless the area on which harvesting occurs is forested artificially or naturally in accordance with the provisions of Chapter 11 (§ 10.1-1100 et seq.) of this title or is converted to bona fide agricultural or improved pasture use as described in subsection B of § 10.1-1163.
- (s) Agricultural engineering operations including, but not limited, to the construction of terraces, terrace outlets, check dams, desilting basins, dikes, ponds not required to comply with the provisions of the Dam Safety Act, Article 2 (§ 10.1-604 et seq.) of Chapter 6 of the Erosion and Sediment Control Law, ditches, strip cropping, lister furrowing, contour cultivating, contour furrowing, land drainage and irrigation.
- (t) Installation of fence and sign posts or telephone and electric poles and other kinds of posts or poles. (Ord. No. 4489, 6/16/07, Sec. 1; Ord. No. 4957, 6/13/15, Sec. 1)

Sec. 5-4-6 - Permits not to be issued without approved erosion and sedimentation control plan when plan required by chapter.

- (a) No permit shall be issued to construct, erect, or alter any building or structure on any land within the city until a plan has been submitted and approved in accordance with the provisions of this chapter and the applicant has certified in writing that the plan will be followed. The person responsible for carrying out the plan shall provide the name of an individual holding a certificate of competence to the program authority, as provided by § 62.1-44.15:52, who will be in charge of and responsible for

carrying out the land disturbing activity. However, any plan-approving authority may waive the certificate of competence requirement for an agreement in lieu of a plan for construction of a single family residence. If a violation occurs during the land-disturbing activity, then the person responsible for carrying out the agreement in lieu of a plan shall correct the violation and provide the name of an individual holding a certificate of competence, as provided by § 62.1-44.15:52. Failure to provide the name of an individual holding a certificate of competence prior to engaging in land-disturbing activities may result in revocation of the approval of the plan and the person responsible for carrying out the plan shall be subject to the penalties provided in this article.

- (b) No permit shall be issued to clear, grade, excavate, fill, remove topsoil from or change the contour of any land within the city until a plan has been submitted and approved in accordance with the provisions of this chapter and the applicant has certified in writing that the plan will be followed. (Ord. No. 4489, 6/16/07, Sec. 1; Ord. No. 4957, 6/13/15, Sec. 1)

Sec. 5-4-7 - Minimum criteria; city handbook.

- (a) The director shall administer and enforce the provisions of this chapter.
- (b) This chapter, the erosion and sediment control regulations of the Department of Environmental Quality (9 VAC 25-840 et seq.), and the "Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, which are incorporated herein by reference, shall be an integral part of the city's erosion and sediment control program and shall comprise the city's "Erosion and Sediment Control Handbook." The text of these regulations is on file in the office of the director.
- (c) In addition to the minimum requirements for controlling erosion and sedimentation for land-disturbing activities which are contained in 9 VAC 25-840, the following additional minimum requirements shall apply:
 - (1) Protection of adjacent properties.
 - a. Properties adjacent to the site of a land disturbance shall be protected from sediment deposition. This may be accomplished by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance, by installing perimeter controls such as sediment barriers, filters, dikes, sediment basins or by a combination of such measures.
 - b. Vegetated buffer strips may be used alone only where runoff in sheet flow is expected. Buffer strips should be at least 20 feet in width. If at any time it is found that a vegetated buffer strip alone is ineffective in stopping sediment movement onto adjacent property, additional perimeter controls must be provided.
 - (2) The director may require sediment basins or traps for smaller disturbed areas where deemed necessary. The sediment basin requirement may also be waived if the director agrees that site conditions do not warrant its construction.
 - (3) Cut and fill slopes. Cut and fill slopes must be designed and constructed in a manner which will minimize erosion. Consideration must be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions and other applicable factors. Slopes which are found to be eroding excessively within one year of construction must be provided with additional slope-stabilizing measures until the problem is corrected. The following guidelines are provided to aid site planners and plan reviewers in developing an adequate design.
 - a. Roughened soil surfaces are generally preferred to smooth surfaces on slopes.
 - b. Diversions should be constructed at the top of long, steep slopes which have significant drainage areas above the slope. Diversions or terraces may also be used to reduce slope length.
 - (4) The following additional stormwater management criteria shall apply: A stormwater management plan consistent with the requirements of Section 13-109(F) in Article XIII of the Alexandria Zoning Ordinance (the Environmental Management Ordinance and the Virginia Stormwater Management Program (VSMP) regulations shall apply. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of this section shall be satisfied by compliance with water quantity

requirements in the Stormwater Management Act (§ 62.1-44.15:24 et seq.) and attendant regulations, unless such land-disturbing activities are in accordance with the grandfathering provisions of the VSMP regulations.

- (5) Runoff rate and channel adequacy must be verified with engineering calculations to the satisfaction of the director.
- (6) All channel improvements or modifications must comply with all applicable laws and regulations.
- (7) If the applicant chooses an option which includes stormwater detention, the applicant must provide the city with a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the party responsible for performing the maintenance. The responsible party may be an individual, organization or the city, whichever has consented to carry out the maintenance. If the designated maintenance responsibility is with an individual or organization other than the city, a maintenance agreement should be executed between the responsible party and the city.
- (8) Stabilization adequate to prevent erosion must be provided at the outlets of all pipes and paved channels. Energy dissipators shall be installed as required by the director.
- (9) Working in or crossing watercourses. Construction vehicles should be kept out of watercourses to the extent possible. Where in-channel work is necessary, precautions must be taken to stabilize the work area during construction to minimize erosion. The channel (including bed and banks) must always be re-stabilized immediately after in-channel work is completed.
- (10) Underground utility lines shall be installed in accordance with the following standard in addition to other applicable criteria: no more than 100 feet of trench are to be opened at one time.
- (11) Maintenance. All temporary and permanent erosion and sediment control practices must be maintained and repaired as specified in 9 VAC 25-840-60.
- (12) Submission of an erosion and sediment control plan to the city is a grant of unlimited right of entry to the property to officials or agents of the city for the purposes of determining adequacy of the proposed plan and inspection of land-disturbing activities for compliance with the approved plan.
- (d) The "Virginia Erosion and Sediment Control Handbook, Third Edition, 1992" and the tree planting and preservation regulations authorized by § 11-410(CC)(1) of the Zoning Ordinance of the City of Alexandria, and known as the city's Landscape Guidelines, shall be used by any applicant making a submittal under this chapter and by the director in his or her review and consideration of the adequacy of landscaping elements included in any erosion and sediment control plan submitted. (Ord. No. 4489, 6/16/07, Sec. 1; Ord. No. 4957, 6/13/15, Sec. 1)

Sec. 5-4-8 - Erosion and sediment control plans.

- (a) Applications for approved erosion and sediment control plans shall be submitted to and filed with the director as part of the plan of development pursuant to the requirements in Article XIII of the Alexandria Zoning Ordinance, on forms prepared by the city, prior to the time any work subject to this chapter is begun on land. Fees for reviewing erosion and sediment control plans, grading plans and performing field inspections for all new structures, exterior alteration, plumbing, electrical, or mechanical building permits where more than 2,500 square feet are disturbed shall be required, the fee to be determined by the director. Five copies of an erosion and sediment control plan or grading plan must accompany any application, parts of which shall also be on forms prepared by the city. Upon receipt of an application and plans, the director shall consider the plan in light of the provisions of this chapter, and Virginia Erosion and Sediment Control Law and attendant regulations, and promptly approve the plan, disapprove the plan or approve the plan with modifications, noting thereon any changes that will be required. The director shall promptly notify the applicant of his or her decision on a plan. Any approved plan shall be issued, dated, and bear the manual signature of the director or appropriate designee prior to the commencement of land-disturbing activities.
- (b) An application shall show the following:

- (1) The name, address and telephone number of the applicant.
- (2) The name, address and telephone number of the owner of record.
- (3) The name, address and telephone number of the person preparing the plan.
- (4) The location of the site, including lot number and tax map page number.
- (5) The total land area, area being disturbed and proposed amount of previous and impervious area.
- (6) Soil types by AASHTO classification (or other classifications used by soil engineers), if available.
- (7) Method for collecting and depositing stormwater.
- (8) Test boring and soil test results when:
 - a. the site is in an area of the city known or suspected by the director to have soil problems or unstable soil;
 - b. any proposed slope on the site exceeds a grade of 20 percent;
 - c. the presence of ground water in substantial amounts is known or suspected by the director to be on the site; or
 - d. unstable soil is known or suspected by the director to be on the site.
- (9) Methods for control of contamination of land when the site is in an area found by the director to be contaminated by a toxic substance and hazardous to the public health, safety and welfare. Said methods shall comply and be in accordance with the "Administrative Procedures for Control of Contaminated Land, Alexandria, Virginia," dated October 30, 1976, that were promulgated by the city manager and adopted by the city council on November 23, 1976, by ordinance number 2145. These administrative procedures may be amended or revised from time to time by the city manager with the approval of the city council by motion.
- (10) A general description of existing trees, shrubs, grass, weeds, vegetation, ground cover and other plant life.
- (11) Any other pertinent information the director may require.
 - (c) An erosion and sediment control plan shall follow the format of map number 4, plate 6-4 of chapter 6 of the city's erosion and sediment control handbook. The plan shall also include appropriate title blocks, scales and a vicinity map.
 - (d) Where land-disturbing activities involve lands under the jurisdiction of more than one local control program an erosion and sediment control plan may, at the option of the applicant, be submitted to the Virginia Soil and Water Conservation Board for review and approval rather than to each jurisdiction concerned.
 - (e) When land-disturbing activity will be required of a contractor performing construction work pursuant to a construction contract, the preparation, submission and approval of an erosion control plan shall be the responsibility of the owner. (Ord. No. 4489, 6/16/07, Sec. 1; Ord. No. 4957, 6/13/15, Sec. 1)

Appendix E – Minimum Control Measure #5

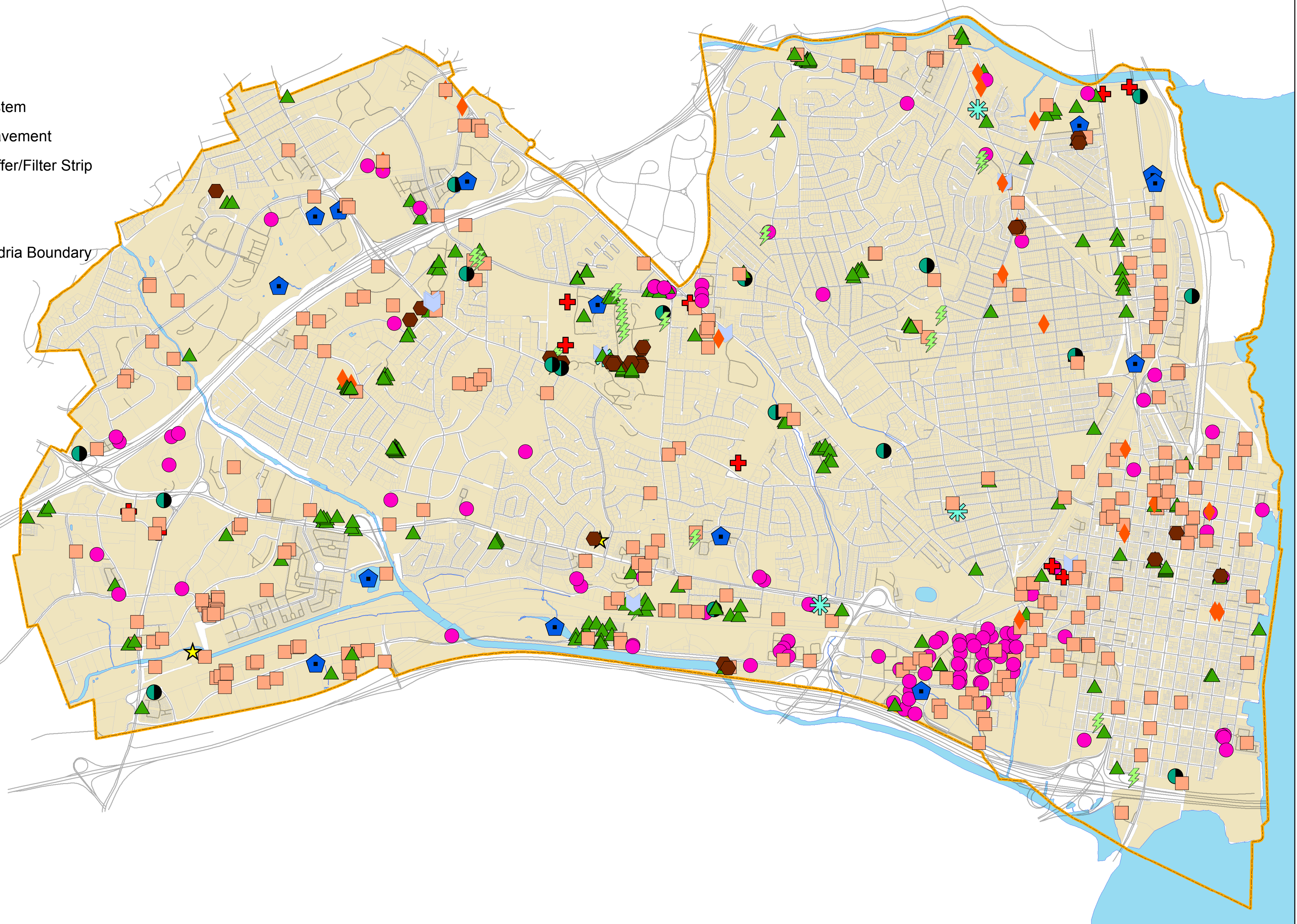
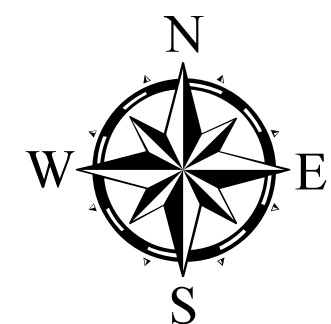
1. City Stormwater BMP Location Map
2. Stormwater BMP Maintenance Agreement example
3. Letter to owners of Single Family Lot BMPs
4. Sample Single-Family Educational Materials for Single-Lot BMPs
5. Local VSMP Authority Approval Letter
6. Environmental Management Ordinance
7. Public Stormwater Facility BMP Inspections
8. Private Stormwater Facility BMP Inspections

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Legend

- ★ Stream Buffer/Restoration
- Sand Filter
- Manufactured Devices
- ▲ Bioretention
- Cistern
- Dry Pond
- ◆ Green Roof
- ✚ Infiltration System
- Permeable Pavement
- ⚡ Vegetated Buffer/Filter Strip
- ✱ Grass Swale
- Wet Pond
- City of Alexandria Boundary

City of Alexandria Stormwater BMP Locations MS4 Reporting Year 2015-2016





STORMWATER MANAGEMENT / BMP FACILITIES OPERATION AND MAINTENANCE AGREEMENT

THIS AGREEMENT, made and entered into this 11th day of January, 2016, by and between, Target Corporation hereinafter called the "Landowner", and the City of Alexandria, Virginia (the "City");

WITNESSTH:

WHEREAS, the Landowner is the owner of certain real property described as tax map # 016.01, block # 05, parcel(s) # 01 as acquired by deed in the land records of the City of Alexandria, Virginia, Deed book _____ Page # _____ (Instrument # 140004971), hereinafter called the "Property".

WHEREAS, the Landowner is proceeding to build on and develop the property; and

WHEREAS, Potomac Yard Center Target Expansion, DSP 2015-0005, hereinafter called the "Plan", which is expressly made a part hereof, as approved or to be approved by the City, provides for detention and/or on-site treatment of stormwater within the confines of the property; and

WHEREAS, the City and the Landowner, its successors and assigns agree that the health, safety and welfare of the residents of the City of Alexandria, Virginia, require that on-site stormwater management/Best Management Practices (BMP) facilities be constructed and maintained on the property; and

WHEREAS, the City requires that on-site stormwater management/BMP facilities as shown on the Plan be constructed and adequately maintained by the Landowner, its successors and assigns.

NOW, THEREFORE, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

1. The on-site stormwater management/BMP facilities shall be constructed by the Landowner, its successors and assigns, in accordance with the plans and specifications identified in the plans.
2. The Landowner, its successors and assigns, shall maintain the stormwater management/BMP facilities in good working conditions, acceptable to the City, so that they are performing their design functions.

3. The Landowner, its successors and assigns, hereby grant permission to the City, its authorized agents and employees, to enter upon the property and to inspect the stormwater management/BMP facilities whenever the City deems necessary. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facility including, berms, inlet and outlet structures, vegetation, infiltration media, pond areas, access roads, etc. When deficiencies are noted, the City shall notify the Landowner, its successors or assigns, and provide information about the inspection findings and evaluations.

4. The Landowner shall develop and attach to this "STORMWATER MANAGEMENT / BMP FACILITIES OPERATION AND MAINTENANCE AGREEMENT" a "BMP MAINTENANCE SCHEDULE AND GUIDELINE" that has been reviewed and approved by the City or its designee. This BMP Maintenance Schedule and Guideline shall describe the maintenance practices to be performed for the facilities and include a maintenance schedule for implementation of these practices.

5. In the event the Landowner, its successors and assigns, fail to maintain the stormwater management/BMP facilities in good working condition acceptable to the City, the City may enter upon the Property and take whatever steps it deems necessary to maintain said stormwater management/BMP facilities and to charge the costs of the repairs to the Landowner, its successors and assigns. This provision shall not be construed to allow the City of Alexandria to erect any structure of a permanent nature on the land of the Landowner, outside of an easement belonging to the City. It is expressly understood and agreed that the City is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the City.

6. The Landowner, its successors and assigns, will perform maintenance in accordance with the maintenance schedule and guidelines for the stormwater management/BMP facilities, including sediment removal, as outlined on the approved plans and the following specific requirements:

Maintenance of the following Best Management Practice(s):

1. Jellyfish Filter (MTD)

shall conform to the requirements contained in the Virginia Stormwater BMP Clearinghouse, the attached maintenance schedule and guidelines, and/or specific maintenance requirements established by the BMP manufacturer as approved by the Director of Transportation and Environmental Services (T&ES) prior to the release of the Final Site Plan. Specific manufacturer maintenance requirements for proprietary BMPs will be submitted to the City of Alexandria, T&ES.

7. In the event the City, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials and the like on account of the Landowner's or its successors' and assigns' failure to perform such work, the Landowner, its successors and assigns, shall reimburse the City, upon demand, within 30 days of receipt thereof for all costs incurred by the City hereunder. If not paid within such 30-day period, the City shall have a lien against the property in the amount of such costs, plus interest at the Judgment Rate, and may enforce it in the same manner a lien for real property taxes may be enforced.

8. The Landowner, its successors and assigns, shall indemnify and hold harmless the City and its agents and employees for any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the City for the construction, presence, existence or maintenance of the stormwater management/BMP facilities by the Landowner, its successors and assigns.

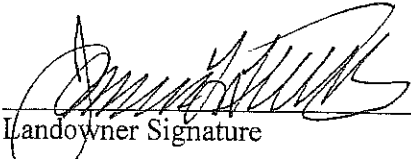
9. In the event a claim is asserted against the City, its agents or employees, the City shall promptly notify the Landowners, their successors and assigns, and they shall defend, at their own expense, any suit based on such claim. If any judgment or claim against the City, its agents or employees shall be allowed, the Landowner, its successors and assigns shall pay all costs and expenses in connection therewith.

10. The Landowner, its successors and assigns, hereby grants permission to the city, its authorized agents, employees, guests, and consultants to enter upon the property to install, operate and maintain equipment to monitor the flow characteristics and pollutant content of the influent and effluent, and at intermediate points in the facility. The Landowner further agrees to design and construct the facility to provide access for monitoring as outlined in the Virginia Stormwater BMP Clearinghouse and/or in the manufacturer's manual for the BMP.

11. The Landowner, its successors and assigns, hereby grants permission to the City, its authorized agents, employees and guests to enter upon the property whenever the City deems necessary, with a ten day advance notice, to conduct tours of the stormwater management/BMP facilities. The purpose of such tours is to expand the base of knowledge in the stormwater management/BMP field amongst planners, engineers, scientists and other interested parties.

12. This Agreement shall be recorded among the land records of the City of Alexandria, Virginia, and shall constitute a covenant running with the land/or equitable servitude, and shall be binding on the Landowner, its administrators, executors, assigns, heirs and other successors in interest.

WITNESS the following signatures and seals:


 Landoner Signature

James L. Tucker
 Print or Type Name Director Real Estate
Target Corporation

Title

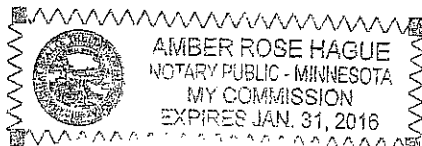
Witness:

ATTEST:

Lisa Wells
State
 COMMONWEALTH OF Minnesota
County
 CITY OF Hennepin

I, Amber Rose Hague, a Notary Public in and for the County
State Commonwealth aforesaid, whose commission expires on the 31st day of
January, 2016, do hereby certify that James L. Tucker,
 whose name(s) is/are signed to the foregoing Agreement bearing date of the 11th
 day of January, 2016, has acknowledged the same before me in my said City and State.

GIVEN UNDER MY HAND THIS 11th day of January, 2016.




 NOTARY PUBLIC

WITNESS the following signatures and seals.

Yon Lambert
Director, Department of T&ES or Designee

Yon Lambert
Print or Type Name

ATTEST:

COMMONWEALTH OF Virginia
CITY OF Alexandria

I, Tarrence Moor, a Notary Public in the City of Alexandria and for the Commonwealth of Virginia, whose commission expires on the 31st day of December, 2019 do hereby certify that Yon Lambert, representative for the City of Alexandria, whose name is signed to the foregoing Agreement bearing the date of the 3rd day of February 2016 has acknowledged the same before me in the City and Commonwealth aforesaid.

GIVEN UNDER MY HAND THIS 3rd day of February, 2016.

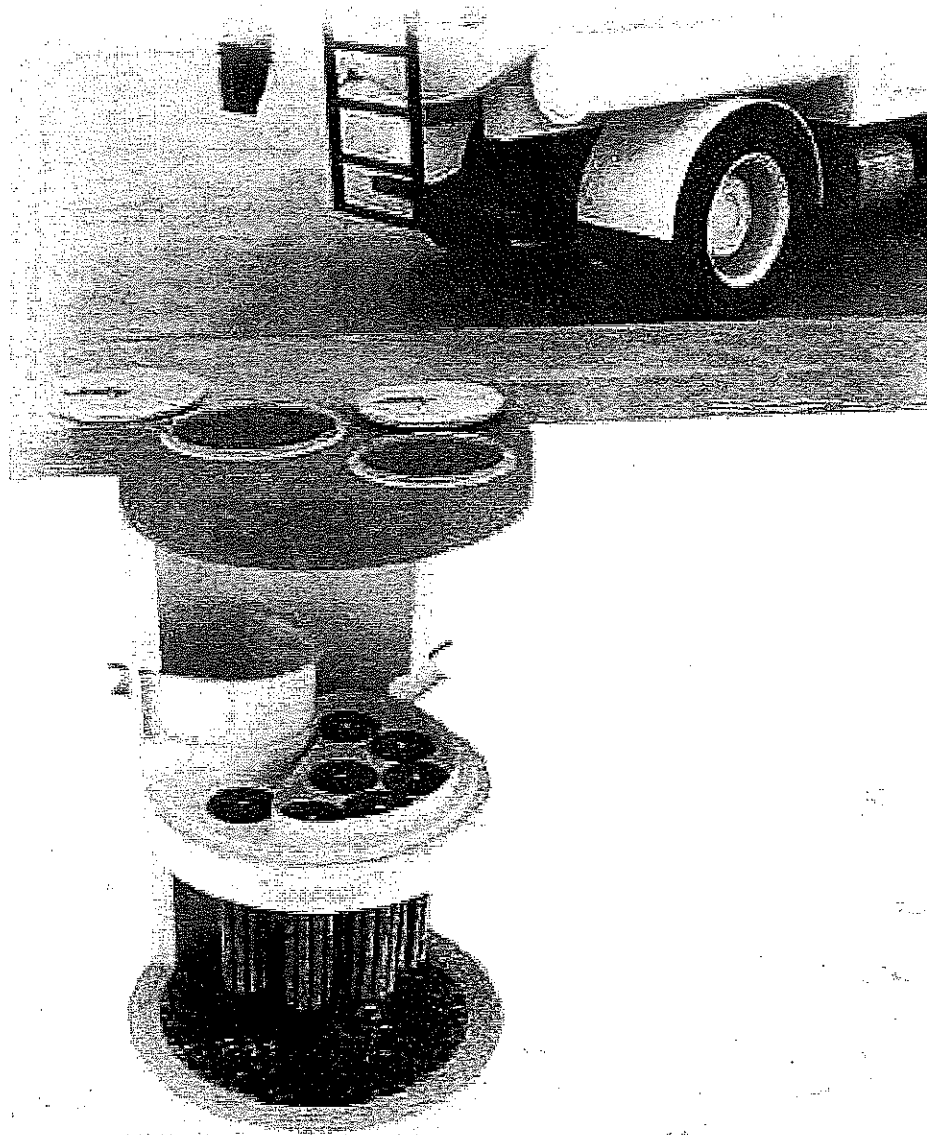
Tarrence L. Moor
NOTARY PUBLIC

Tarrence L. Moor
NOTARY PUBLIC
Commonwealth of Virginia
Reg. #7349860
My Commission Expires 12/31/2019





Jellyfish® Filter Manhole Installations Inspection and Maintenance Manual



CONTECH Engineered Solutions
1-800-548-4667

Inspection and Maintenance Overview

The primary purpose of the Jellyfish® Filter is to capture and remove pollutants from stormwater runoff. As with any filtration system, these pollutants must be removed to maintain the filter's maximum treatment performance. Regular inspection and maintenance are required to insure proper functioning of the system.

Maintenance frequencies and requirements are site specific and vary depending on pollutant loading. Maintenance activities may be required in the event of an upstream chemical spill or due to excessive sediment loading from site erosion or extreme runoff events. It is a good practice to inspect the system after major storm events.

Inspection activities are typically conducted from surface observations and include:

- Observe if standing water is present
- Observe if there is any physical damage to the deck or cartridge lids
- Observe the amount of debris in the Maintenance Access Wall (MAW)

Maintenance activities typically include:

- Removal of oil, floatable trash and debris
- Removal of collected sediments
- Rinsing and re-installing the filter cartridges
- Replace filter cartridge tentacles, as needed.

It is recommended that Jellyfish Filter inspection and maintenance be performed by professionally trained individuals, with experience in stormwater maintenance and disposal services. Maintenance procedures may require manned entry into the Jellyfish structure. Only professional maintenance service providers trained in confined space entry procedures should enter the vessel. Procedures, safety and damage prevention precautions, and other information, included in these guidelines, should be reviewed and observed prior to all inspection and maintenance activities.

Inspection Timing

Inspection of the Jellyfish Filter is key in determining the maintenance requirements for, and to develop a history of the site's pollutant loading characteristics. In general, inspections should be performed at the times indicated below; or *per the approved project stormwater quality documents (if applicable), whichever is more frequent.*

- Post-construction inspection is required prior to putting the Jellyfish Filter into service. All construction debris or construction-related sediment within the device must be removed, and any damage to system components repaired.
- A minimum of two inspections during the first year of operation to assess the sediment and floatable pollutant accumulation, and to ensure proper functioning of the system.
- Inspection frequency in subsequent years is based on the inspection and maintenance plan developed in the first year of operation. Minimum frequency should be once per year.
- Inspection is recommended after each major storm event.
- Immediately after an upstream oil, fuel or other chemical spill.

Inspection Tools and Equipment

The following equipment and tools are typically required when performing a Jellyfish Filter inspection:

- Access cover lifting tool
- Sediment probe (clear hollow tube with check valve)
- Tape measure
- Flashlight
- Camera
- Inspection and maintenance log documentation
- Safety cones and caution tape
- Hard hat, safety shoes, safety glasses, and chemical-resistant gloves

Inspection Procedure

The following procedure is recommended when performing inspections:

- Provide traffic control measures as necessary.
- Inspect the MAW for floatable pollutants such as trash, debris, and oil sheen.
- Measure oil and sediment depth by lowering a sediment probe through the MAW opening until contact is made with the floor of the structure. Retrieve the probe, record sediment depth, and presences of any oil layers and repeat in multiple locations within the MAW opening. *Sediment depth of 12 inches or greater indicates maintenance is required.*
- Inspect cartridge lids. Missing or damaged cartridge lids to be replaced.
- Inspect the MAW, cartridge deck, and backwash pool weir, for cracks or broken components. If damaged, repair is required.
- **Dry weather inspections:** inspect the cartridge deck for standing water.
 - No standing water under normal operating condition.
 - Standing water **inside** the backwash pool, but not outside the backwash pool, this condition indicates that the filter cartridges need to be rinsed.
 - Standing water **outside** the backwash pool may indicate a backwater condition caused by high water elevation in the receiving water body, or possibly a blockage in downstream infrastructure.
- **Wet weather inspections:** observe the rate and movement of water in the unit. Note the depth of water above deck elevation within the MAW.
 - **Less than 6 inches**, flow should be exiting the cartridge lids of each of the draindown cartridges (i.e. cartridges located outside the backwash pool).
 - **Greater than 6 inches**, flow should be exiting the cartridge lids of each of the draindown cartridges and each of the hi-flo cartridges (i.e. cartridges located inside the backwash pool), and water should be overflowing the backwash pool weir.
 - **18 inches or greater** and relatively little flow is exiting the cartridge lids and outlet pipe, this condition indicates that the filter cartridges are occluded with sediment and need to be rinsed.

Maintenance Requirements

Required maintenance for the Jellyfish Filter is based upon results of the most recent inspection, historical maintenance records, or the site specific water quality management plan; whichever is more frequent. In general, maintenance requires some combination of the following:

- Sediment removal for depths reaching 12 inches or greater, or within 3 years of the most recent sediment cleaning, whichever occurs sooner.

- Floatable trash, debris, and oil must be removed.
- Filter cartridges rinsed and re-installed as required by the most recent inspection results, or within 12 months of the most recent filter rinsing, whichever occurs sooner.
- Replace filter cartridge if rinsing does not remove accumulated sediment from the tentacles, or if tentacles are damaged or missing. It is recommended that tentacles should remain in service no longer than 5 years before replacement.
- Damaged or missing cartridge deck components must be repaired or replaced as indicated by results of the most recent inspection.
- The unit must be cleaned out and filter cartridges inspected immediately after an upstream oil, fuel, or chemical spill. Filter cartridge tentacles should be replaced if damaged by the spill.

Maintenance Tools and Equipment

The following equipment and tools are typically required when performing Jellyfish Filter maintenance:

- Vacuum truck
- Ladder
- Garden hose and low pressure sprayer
- Rope or cord to lift filter cartridges from the cartridge deck to the surface
- Adjustable pliers for removing filter cartridge tentacles from cartridge head plate
- Plastic tub or garbage can for collecting effluent from rinsed filter cartridge tentacles
- Access cover lifting tool
- Sediment probe (clear hollow tube with check valve)
- Tape measure
- Flashlight
- Camera
- Inspection and maintenance log documentation
- Safety cones and caution tape
- Hard hats, safety shoes, safety glasses, chemical-resistant gloves, and hearing protection for service providers
- Proper safety equipment for confined space entry
- Replacement filter cartridge tentacles if required

Maintenance Procedure

The following procedures are recommended when maintaining the Jellyfish Filter:

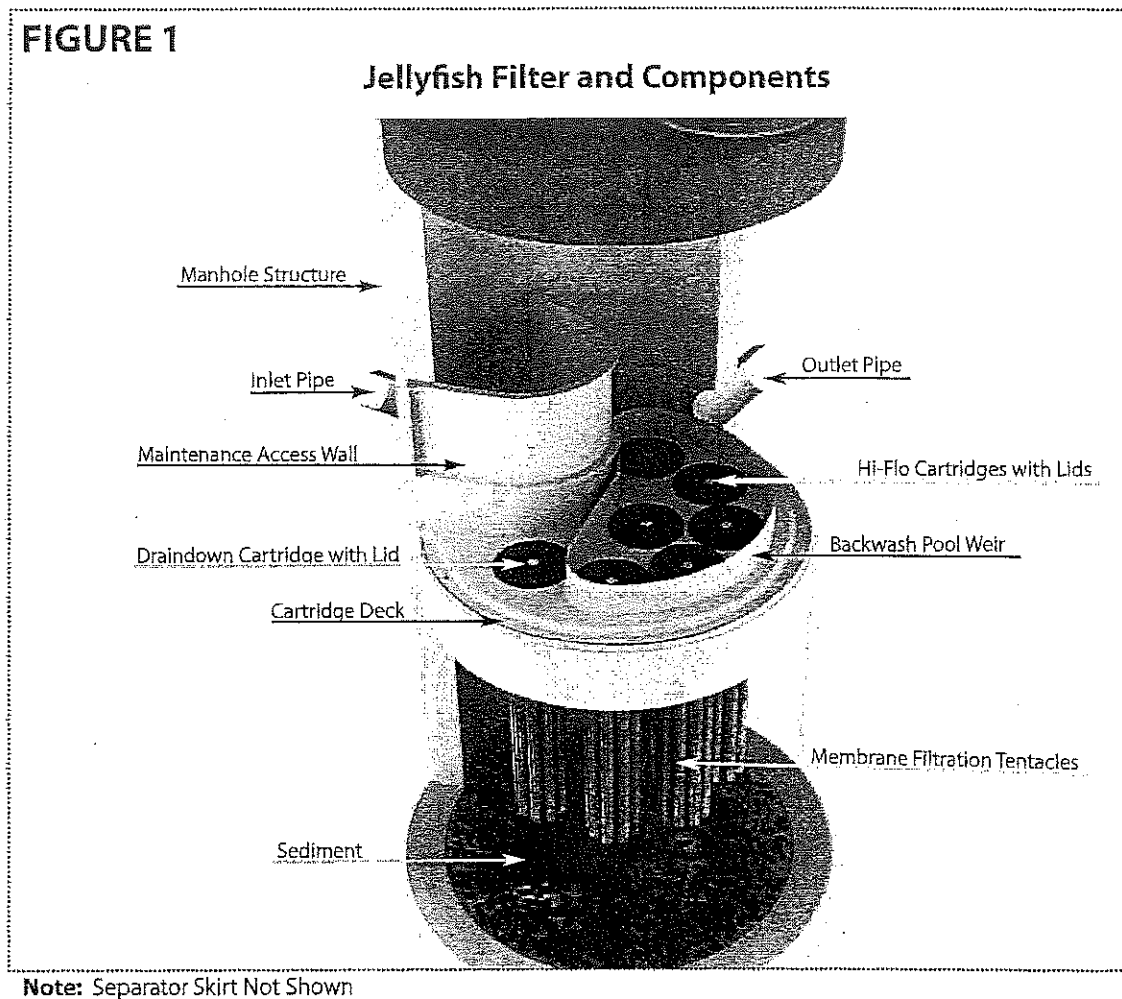
- Provide traffic control measures as necessary.
- Open all covers and hatches. Use ventilation equipment as required, according to confined space entry procedures.
- **Caution:** Dropping objects onto the cartridge deck may cause damage.
- Perform **Inspection Procedure** prior to maintenance activity.
- To access the cartridge deck for filter cartridge service, descend the ladder and step directly onto the deck. **Caution:** Do not step onto the maintenance access wall (MAW) or backwash pool weir, as damage may result. Note that the cartridge deck may be slippery.
- **Filter Cartridge Rinsing Procedure**
 - Remove a cartridge lid.
 - Remove the cartridge from the receptacle using the lifting loops in the cartridge head plate. **Caution:** Should a snag occur, do not force the cartridge upward as damage to the tentacles may result. Rotate the cartridge with a slight sideways motion to clear the snag and continue removing the cartridge.

- Thread a rope or cord through the lifting loops and lift the filter cartridge from the cartridge deck to the top surface ~~outside~~ the structure.
- **Caution:** Immediately replace and secure the lid on the exposed empty receptacle as a safety precaution. Never expose more than one empty cartridge receptacle.
- Repeat the filter cartridge removal procedure until all of the cartridges are located at the top surface outside the structure.
- Disassemble the tentacles from each filter cartridge by rotating counter-clockwise. Remove the tentacles from the cartridge head plate.
- Position a receptacle in a plastic tub or garbage can such that the rinse water is captured. Using a low-pressure garden hose sprayer, direct a wide-angle water spray at a downward 45° angle onto the tentacle membrane, sweeping from top to bottom along the length of the tentacle. Rinse until all sediment is removed from the membrane. **Caution:** Do not use a high pressure sprayer or focused stream of water on the membrane. Excessive water pressure may damage the membrane.
- Remove rinse water from rinse tub or garbage can using a vacuum hose as needed.
- Slip the O-ring over the pipe nipple on the top end of the tentacle and reassemble onto the cartridge head plate; hand tighten.
- If rinsing is ineffective in removing sediment from the tentacles, or if tentacles are damaged, provisions must be made to replace the spent or damaged tentacles with new tentacles. Contact Contech to order replacement tentacles.
- Lower a rinsed filter cartridge to the cartridge deck. Remove the cartridge lid on a receptacle and carefully lower the filter cartridge into the receptacle until the head plate gasket is seated squarely on the lip of the receptacle. **Caution:** Should a snag occur when lowering the cartridge into the receptacle, do not force the cartridge downward; damage may occur. Rotate the cartridge with a slight sideways motion to clear the snag and complete the installation.
- Replace the cartridge lid on the exposed receptacle. Check the fit before completing rotation to a firm hand-tight attachment. Rinse away any accumulated grit from the receptacle threads if needed to get a proper fit.
- Repeat cartridge installation until all cartridges are installed.
- **Vacuum Cleaning Procedure**
 - **Caution:** Perform vacuum cleaning of the Jellyfish Filter only after filter cartridges have been removed from the system. Access the lower chamber for vacuum cleaning **only through the maintenance access wall (MAW) opening**, being careful not to damage the flexible plastic separator skirt that is attached to the underside of the deck. The separator skirt surrounds the filter cartridge zone, and could be torn if contacted by the wand. **Do not lower the vacuum wand through a cartridge receptacle**, as damage to the receptacle will result.
 - To remove floatable trash, debris, and oil, lower the vacuum hose into the MAW opening and vacuum floatable pollutants off the surface of the water. Alternatively, floatable solids may be removed by a net or skimmer.
 - Using a vacuum hose, remove the water from the lower chamber to the sanitary sewer, if permitted by the local regulating authority, or into a separate containment tank.
 - Remove the sediment from the bottom of the unit through the MAW opening.
 - For larger diameter Jellyfish Filter manholes (8-ft, 10-ft, 12-ft diameter), complete sediment removal may be facilitated by removing a cartridge lid from an empty receptacle and inserting a jetting wand (not a vacuum wand) through the receptacle. Use the sprayer to rinse loosened sediment toward the vacuum hose in the MAW opening, being careful not to damage the receptacle.
 - After the unit is clean, re-fill the lower chamber with water if required by the local jurisdiction, and re-install filter cartridges.
 - Dispose of sediment, floatable trash and debris, oil, spent tentacles, and water according to local regulatory requirements.

- **Chemical Spills**

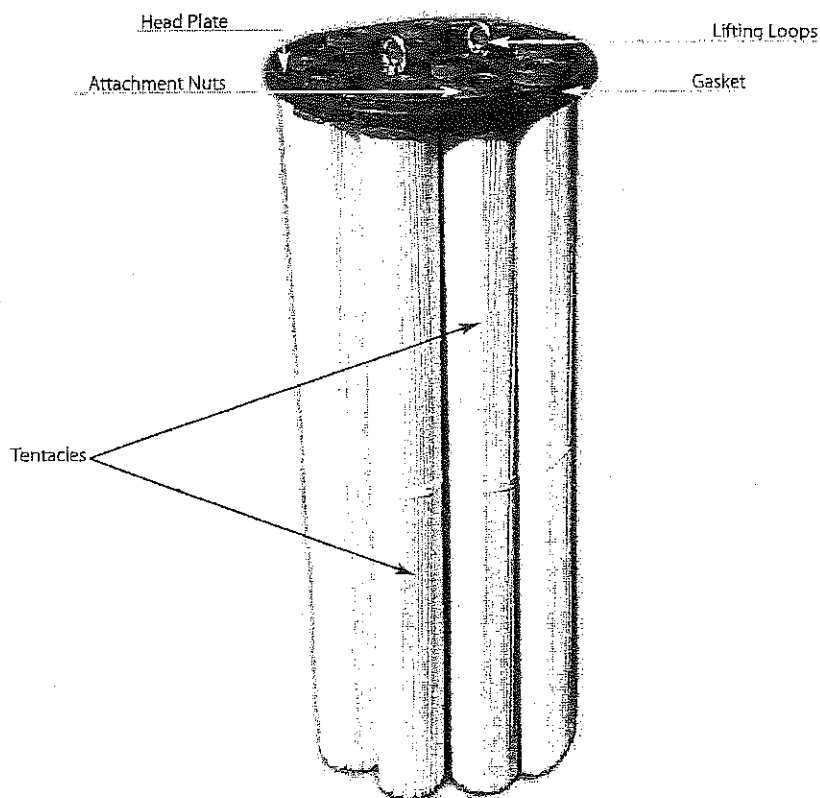
- **Caution:** If a chemical spill has been captured by the Jellyfish Filter, do not attempt maintenance. Immediately contact the local hazard response agency, and contact Contech Engineered Services.

Below is a cut-away schematic of the Jellyfish Filter manhole with key components identified (6-ft diameter manhole is depicted).

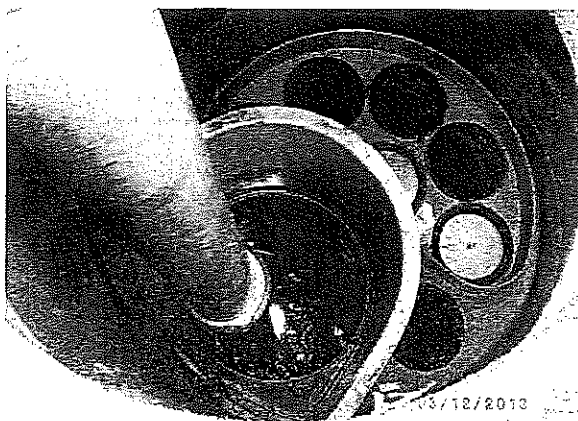
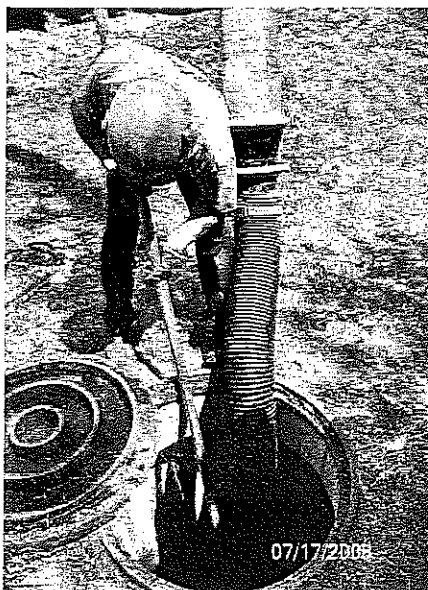


The Jellyfish Filter has no moving parts to wear out and therefore maintenance activities are generally focused on pollutant removal and filter cartridge service.

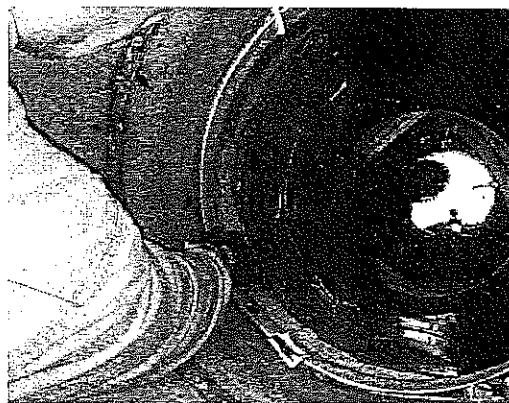
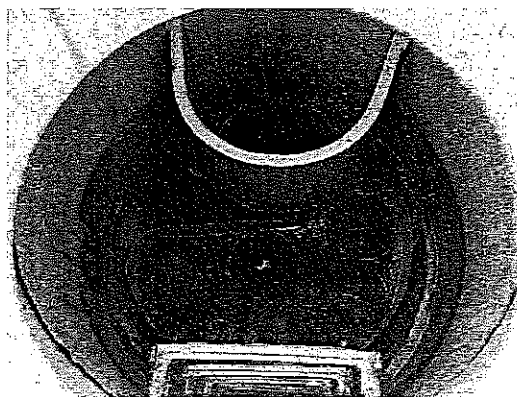
Below is a schematic of a Jellyfish Filter membrane filtration cartridge. Tentacles can be easily removed from the head plate and rinsed or replaced as needed.

FIGURE 2**Jellyfish Membrane Filtration Cartridge**

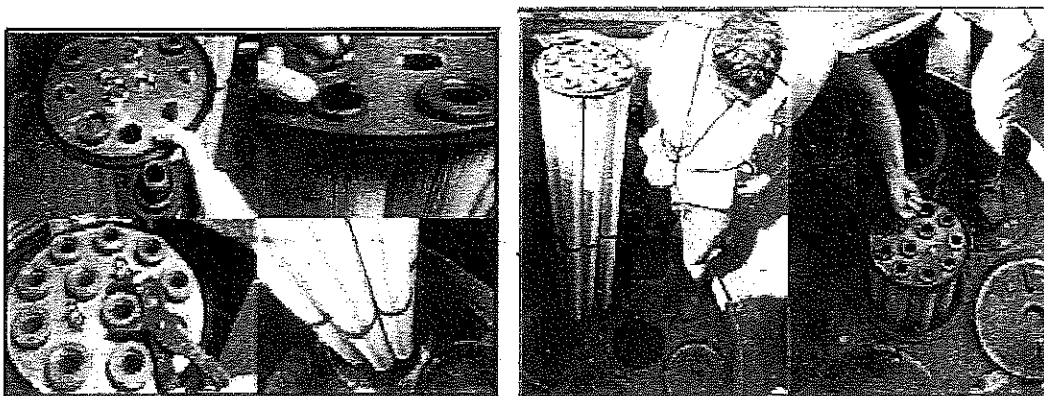
The depth of sediment and oil can be measured from the surface by using a sediment probe or dipstick tube equipped with a ball check valve and inserted through the Jellyfish Filter's maintenance access wall opening. The large opening provides convenient access for inspection and vacuum removal of water and pollutants.



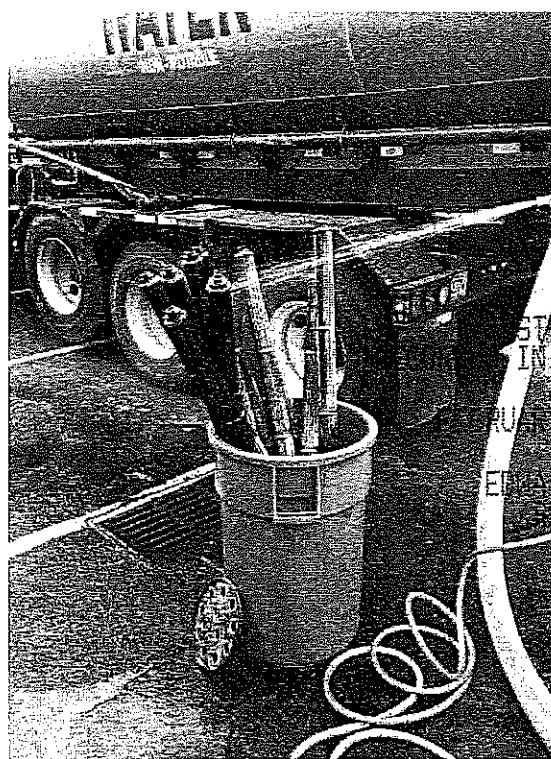
A maintenance worker stationed on the surface uses a vacuum hose to evacuate water, sediment, and floatables from the Jellyfish Filter by inserting the vacuum wand through the maintenance access wall opening.



A view of a Jellyfish Filter cartridge deck from the surface showing all the cartridge lids intact and no standing water on the deck (left image), and inspection of the flexible separator skirt from inside the maintenance access wall opening (right image).



Assembly of a Jellyfish Filter cartridge (left) and installation of a filter cartridge into a cartridge receptacle in the deck (right).



STRUMENT #160001678
IN THE CLERK'S OFFICE OF
ALEXANDRIA ON
FEBRUARY 10, 2016 AT 11:34AM
February 10, 2016
EDWARD SEMONIAN, CLERK
RECORDED BY: JAH

Rinsing of dirty filter cartridge tentacles with a low-pressure garden hose sprayer, and using a plastic garbage container to capture rinse water.

The benefits of regular inspection and maintenance are many – from ensuring maximum operation efficiency, to keeping maintenance costs low, to the continued protection of natural waterways – and provide the key to the Jellyfish Filter's long and effective service life.

Ordering Replacement Parts

Jellyfish Filter cartridges, replacement tentacles, cartridge lids, and other system components can be ordered by contacting: **Contech Engineered Solutions, 1-800-548-4667**

A COPY OF THIS DOCUMENT IS FILED IN THE CLERK'S OFFICE OF ALEXANDRIA

DEPUTY CLERK

ANY PROVISION CONTAINED HEREIN WHICH PURPORTS TO RESTRICT OR AFFECT THE HOLDING, OCCUPANCY, OWNERSHIP, RENTAL, LEASE OR TRANSFER OF ANY REAL ESTATE, OR THE BASIS OF RACE, COLOR, SEX, RELIGION, NATIONAL ORIGIN, FAMILIAL STATUS, AGE, AND DISABILITY OR OTHERWISE IS HEREBY REJECTED.



Site Plan Number: DSP2015-00005
Project Name: Target Expansion
Address: 3601 Jefferson Davis Highway
Date: 1/27/2016

BMP Monitoring and Maintenance Agreement Routing Slip
As part of Site/Grading Plan Approval Process

The following routing procedure is to be used to help track BMP maintenance and certification requirements during the plan review stage. Before a final site plan may be approved, and as part of 2nd final submittal, the applicant must submit a BMP Monitoring and Maintenance Agreement with the City. Two original signed and notarized versions shall be submitted to the Site Plan Coordinator. The applicant must also submit a copy of the BMP Operation and Maintenance Manual.

Routing (Please Initial and Date):

[Signature] 1/27/2016 Shanna Austin, Development Coordinator c/o Mary A Winston, T&ES, I-ROW
Two Original Agreements (signed and notarized) received by T&ES / I-ROW

[Signature] 1/28/2016 Wisdom Gbediame, Water Quality Compliance Specialist, T&ES, SS-I
Review and verifies Agreement and specified BMP. Agreements forwarded to Director of T&ES for signature

[Signature] 2/1/16 Yon Lambert, c/o Eleonore Cox, Director of T&ES for signature and date
Director of T&ES reviews agreement, signs and dates both copies, and sends both copies back to T&ES / Development

____ Penny Frazier, Engineering Aide II, T&ES, I-ROW
Staff notarizes agreement, makes a copy for record for SS-I, and retains originals for T&ES / Engineering (Development Coordinator)

____ Shanna Austin, Development Coordinator c/o Mary A Winston, T&ES, I-ROW
Sends the Agreement back to the applicant to record with Land Records Division of the Circuit Court

The BMP Maintenance Agreement must be executed and recorded with the Land Records Division of Alexandria Circuit Court. The applicant is required to submit proof (i.e. Receipt) that the Agreement has been recorded prior to the release of the Site Plan.

☐ Received proof of recordation (copy given to SS-I for files)

Final Site Plan/Grading Plan can not be released until the receipt of evidence that agreement has been duly recorded.



City of Alexandria, Virginia
Department of Transportation & Environmental Services
Stormwater and Sanitary Infrastructure Division
2900-B Business Center Drive
Alexandria, VA 22314
www.alexandriava.gov

October 22, 2015

Dear Facility Owner:

Your property contains a stormwater Best Management Practice (BMP) that functions to treat stormwater runoff and improve the quality of the water in and around the City of Alexandria. This letter serves as an annual reminder that routine inspection and maintenance is an essential part of the ownership of any BMP. Regular maintenance ensures that BMPs do not generate additional pollutants, become nuisances, or pose safety issues, and that they function properly. When maintenance problems do exist, they are most often less costly to correct when they are caught early. BMP maintenance is not only an integral part of BMP ownership, but is also a requirement of the City's local stormwater program. City ordinance {13-109(G)} states that all stormwater BMPs must be adequately maintained by their owners to ensure that the BMPs function as designed.

Examples of stormwater BMPs include rain barrels, bioretention filters, sand filters, permeable pavement, and vegetated buffer strips, to name a few. These BMPs improve the quality of stormwater runoff from a developed site by reducing pollutants such as sediment, oil, litter, and excess nutrients that may enter our streams and waterways, such as Four Mile Run, Holmes Run, the Potomac River and Chesapeake Bay.

The City of Alexandria values its environment, and its programs are closely aligned with the goal established by the City's Strategic Plan that all residents of Alexandria experience "a city that respects, protects, and enhances the natural environment;" and the Eco-City Charter principle that "water quality in Alexandria will be managed in a sustainable manner consistent with good stewardship of the local streams, the Potomac River and the Chesapeake Bay for...current and future generations."

Please contact me at 703-746-4071 or by email at Wisdom.Gbediame@alexandriava.gov if you have any questions regarding your BMP. Your time and cooperation are greatly appreciated and working together will help to achieve our goal of protecting our streams, the Potomac River, and the Chesapeake Bay.

Sincerely,

A handwritten signature in dark ink, reading "Wisdom K. Gbediame". The signature is fluid and cursive, with the first name "Wisdom" being the most prominent.

Wisdom K. Gbediame
Water Quality Compliance Specialist
City of Alexandria, VA



Rain Barrel BMP Fact Sheet

DID YOU KNOW...polluted stormwater runoff is the number one cause of water pollution in Northern Virginia? That's right; the very same rain that runs over streets, yards, and parking lots can send chemicals, dirt, and trash down the storm drains and into our local water bodies like the Potomac River and Chesapeake Bay!

Did you know your property is designed to improve water quality? Your property has a Best Management Practice (BMP) onsite that is used to treat stormwater runoff before it enters our local waterways.

What is a BMP? Stormwater runoff is water that flows over land, through drainage systems, and into our local waterways during and after rain storms or snow melts. Untreated stormwater can carry excess nutrients, sediment, and other contaminants into our waters. BMPs are structural practices that treat, store, or infiltrate runoff onsite before it can affect water bodies downstream. BMPs include structures such as ponds, sand filters, and bioretention areas to name a few. The use of stormwater BMPs helps to manage stormwater and to protect our City's lands and streams from erosion, flooding, and pollutants. When BMPs are maintained and function properly, they can help to improve water quality. When BMPs fail or cease to function, they can actually make water quality worse!



Example Rainwater Harvesting

Rain Barrels

Rain barrels intercept and store rainfall for future use. Rain barrels typically consist of a gutter system and storage tank that can be located on a land surface or underground. Water in the storage tank can be used for non-potable uses such as irrigation or exterior washing.

Maintenance of your BMP is a VITAL to keep it functioning properly and it is required by City Ordinance!

Common maintenance issues associated with rainwater harvesting:

- Leaves and debris in gutters and downspouts
- Clogging of screens
- Not using the stored water resulting in the rain barrel being unable to store additional runoff during storms

A BMP maintenance guideline is included with this document. Performing these routine maintenance tasks helps to ensure the function and performance of your BMP.

If you have any questions regarding your inspection and maintenance responsibilities, please call the City of Alexandria, Virginia Department of Transportation and Environmental Services, Stormwater and Sanitary Infrastructure Division at 703.746.4071.

Rain Barrel Maintenance Guidelines

Routine Maintenance Guidelines

Rain barrels must be inspected to ensure they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove leaves and debris from gutters and downspouts	Semi-annually
Remove any algae growth	Semi-annually
Inspect and clean prescreening devices and first flush diverters	Quarterly
Inspect and clean storage tank lids	Annually
Inspect and repair any clogging	Annually
Inspect and repair mosquito screens	Annually
Inspect tank and remove sediment build up	Every 3 years
Clear overhanging vegetation and trees over roof	Every 3 years
Replace damaged or defective system components	As needed



Permeable Pavement BMP Fact Sheet

DID YOU KNOW...polluted stormwater runoff is the number one cause of water pollution in Northern Virginia? That's right; the very same rain that runs over streets, yards, and parking lots can send chemicals, dirt, and trash down the storm drains and into our local water bodies like the Potomac River and Chesapeake Bay!

Did you know your property is designed to improve water quality? Your property has a Best Management Practice (BMP) onsite that is used to treat stormwater runoff before it enters our local waterways.

What is a BMP? Stormwater runoff is water that flows over land, through drainage systems, and into our local waterways during and after rain storms or snow melts. Untreated stormwater can carry excess nutrients, sediment, and other contaminants into our waters. BMPs are structural practices that treat, store, or infiltrate runoff onsite before it can affect water bodies downstream. BMPs include structures such as ponds, sand filters, and bioretention areas to name a few. The use of stormwater BMPs helps to manage stormwater and to protect our City's lands and streams from erosion, flooding, and pollutants. When BMPs are maintained and function properly, they can help to improve water quality. When BMPs fail or cease to function, they can actually make water quality worse!



Example Permeable Pavement

Permeable Pavement

Permeable pavement is an alternative type of paving that allows stormwater to filter through voids to a stone reservoir.

Water is temporarily stored in the reservoir and may be infiltrated into the ground. Permeable pavement can consist of pervious concrete, porous asphalt, or interlocking pavers. Permeable pavement works to reduce the amount of runoff and to remove nutrients during rain events.

Maintenance of your BMP is a VITAL to keep it functioning properly and it is required by City Ordinance!

Common maintenance issues associated with permeable pavement:

- Clogging of the pavement
- Organic debris and sediment accumulation on the pavement
- Structural cracking or breaking

A BMP maintenance guideline is included with this document. Performing these routine maintenance tasks helps to ensure the function and performance of your BMP.

If you have any questions regarding your inspection and maintenance responsibilities, please call the City of Alexandria, Virginia Department of Transportation and Environmental Services, Stormwater and Sanitary Infrastructure Division at 703.746.4071.

Permeable Pavement Maintenance Schedule and Guidelines

Routine Maintenance Guidelines

Permeable pavement must be inspected to ensure that it operates in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Inspect facility for clogging and repair any clogging and improper drainage	Annually
Inspect for and repair any structural damage	Annually
Inspect for repair any clogged or damaged inlets and outlets	Annually



Bioretention BMP Fact Sheet

DID YOU KNOW...polluted stormwater runoff is the number one cause of water pollution in Northern Virginia? That's right; the very same rain that runs over streets, yards, and parking lots can send chemicals, dirt, and trash down storm the drains and into our local water bodies like the Potomac River and Chesapeake Bay!

Did you know your property is designed to improve water quality? Your property has a Best Management Practice (BMP) onsite that is used to treat stormwater runoff before it enters our local waterways.

What is a BMP? Stormwater runoff is water that flows over land, through drainage systems, and into our local waterways during and after rain storms or snow melts. Untreated stormwater can carry excess nutrients, sediment, and other contaminants into our waters. BMPs are structural practices that treat, store, or infiltrate runoff onsite before it can affect water bodies downstream. BMPs include structures such as ponds, sand filters, and bioretention areas to name a few. The use of stormwater BMPs helps to manage stormwater and to protect our City's lands and streams from erosion, flooding, and pollutants. When BMPs are maintained and function properly, they can help to improve water quality. When BMPs fail or cease to function, they can actually make water quality worse!



Example Bioretention

Bioretention

A bioretention area is a shallow landscaped depression that captures runoff. During rain events, water ponds six to twelve inches above the bottom of the depression, then filters through special media installed underground called the filter bed. A typical bioretention area consists of a filter bed, landscaping, a mulch or turf layer, an underdrain, and an outlet. Bioretention areas remove pollutants through filtration, biological uptake, and microbial activity.

Maintenance of your BMP is a VITAL to keep it functioning properly and it is required by City Ordinance!

Common maintenance issues associated with bioretention areas:

- Loss of plants
- Trash and debris accumulation
- Sediment accumulation
- Mulch layer less than 3 inches deep or over 3 years old
- Clogging
- Erosion

A BMP maintenance guideline is included with this document. Performing these routine maintenance tasks helps to ensure the function and performance of your BMP.

If you have any questions regarding your inspection and maintenance responsibilities, please call the City of Alexandria, Virginia Department of Transportation and Environmental Services, Stormwater and Sanitary Infrastructure Division at 703.746.4071.

Bioretention Area Maintenance Schedule and Guidelines

First Year Maintenance Guidelines

Successful establishment of bioretention areas requires that the following tasks be undertaken in the first year following installation:

- Initial inspections. For the first 6 months following construction, the bioretention area should be inspected at least twice after storm events that exceed 1/2 inch of rainfall.
- Spot reseeding. Inspect for bare or eroding areas in the contributing drainage area or around the bioretention area, and make sure they are immediately stabilized with grass cover.
- Watering. Watering is needed once a week during the first 2 months, and then as needed during first growing season (April-October), depending on rainfall.
- Remove and replace dead plants.

Routine Maintenance Guidelines

Bioretention areas must be inspected to ensure that they operate in good working condition and in accordance with the approved design and specifications. Items in need of repair must be immediately addressed.

Routine Maintenance Tasks	Frequency
Remove trash and debris	As needed
Check and repair eroded areas	Annually
Inspect for and remove excess sediment	Annually
Mow grass filter strips and bioretention turf cover	At least four times per year
Weed and rake mulch	Twice during the growing season
Inspect plant composition for consistency with approved plans and correct any deficiencies	Annually
Remulch to maintain a three inch layer	Annually
Prune trees and shrubs	Annually
Inspect for clogging or ponding water in the filter bed	Annually
Remove invasive plants	As needed
Replace dead or damaged plant material	As needed
Repair broken pipes	As needed
Remove sediment in pretreatment cells and inflows	Every 2-3 years
Replace the mulch layer	Every 3 years



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

December 22, 2014

(804) 698-4000
1-800-592-5482

Rashad M. Young, City Manager
City of Alexandria
301 King Street, Room 3500
Alexandria, Virginia 22314

Dear Mr. Young:

In accordance with §62.1-44.15:27 G of the Virginia Stormwater Management Act (Act), Department of Environmental Quality (DEQ) has completed the review of the City of Alexandria's final Virginia Stormwater Management Program (VSMP) application package submitted on November 4, 2014. Based on this review, DEQ has determined that the City of Alexandria's VSMP is consistent with the Act, the VSMP regulation and the General VPDES Permit for Discharges of Stormwater from Construction Activities.

In light of this determination, DEQ approves the City of Alexandria's VSMP and the City is authorized to operate a VSMP as of July 1, 2014. Please note that this approval is based on the content of the application package. Any changes made to the documents in the package after the approval date, including changes to the adopted ordinance, may necessitate DEQ evaluation as part of its compliance review of your approved VSMP.

Thank you for your cooperation in developing a VSMP. We look forward to continuing to assist the City with the implementation of its VSMP.

Sincerely,

A handwritten signature in black ink, appearing to read "David K. Paylor".

David K. Paylor

cc: Melanie Davenport, Director, Water Division
Frederick Cunningham, Director, Office of Water Permits
Joan Salvati, Manager, Local Government Stormwater Programs

ARTICLE XIII. - ENVIRONMENTAL MANAGEMENT

FOOTNOTE(S):

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Editor's note— Ord. No. 4865, § 1, adopted March 15, 2014, repealed Art. XIII and enacted a new article as set out herein. The former Art. XIII, §§ 13-100—13-120, pertained to similar subject matter and derived from Ord. No. 4443, § 1, adopted April 22, 2006.

Sec. 13-100. - General findings.

The Chesapeake Bay is one of the most productive estuaries in the world, providing substantial economic and social benefits to the people of the Commonwealth of Virginia. Healthy state and local economies are integrally related to and dependent upon the health of the Chesapeake Bay. The general welfare of the people of the Commonwealth depends upon the health of the Bay.

The waters of the Chesapeake Bay and its tributaries, including the Potomac River and Alexandria's local streams, have been degraded significantly by point source and nonpoint source pollution, which threatens public health and safety and the general welfare.

13-101 - Purpose.

- (A) It is the policy of the City of Alexandria, Virginia to protect the quality of water in the Chesapeake Bay and its tributaries and, to that end, to require all land uses and land development in the city to:
 - (1) Safeguard the waters of the commonwealth from pollution;
 - (2) Prevent any increase in pollution of state waters;
 - (3) Reduce existing pollution of state waters; and
 - (4) Promote water resource conservation.
- (B) To fulfill this policy, this Article XIII is adopted to minimize potential pollution from stormwater runoff, minimize potential erosion and sedimentation, reduce the introduction of harmful nutrients and toxins into state waters, maximize rainwater infiltration while protecting groundwater, and ensure the long-term performance of the measures employed to accomplish the statutory purpose.
- (C) The provisions of this chapter shall be deemed severable, and the invalidity or unenforceability of any individual provision or section hereof shall not affect the validity and enforceability of the remaining provisions of the chapter.

13-102 - Authority.

This Article XIII is issued under the authority of Section 62.1-44.15:73 of the Code of Virginia (the Chesapeake Bay Preservation Act), 62.1-44.15:24 et seq. of the Code of Virginia (the Virginia Stormwater Management Act) and attendant regulations as adopted by the Virginia State Water Control Board. Code of Virginia Section 62.1-44.15:27 specifically requires the City to adopt a Virginia Stormwater Management Program. Authority to protect water quality is also provided by Section 15.2-2283 of the Code of Virginia.

13-103 - Definitions.

The following words and terms used in this Article XIII have the following meanings, unless the context clearly indicates otherwise.

- (A) *Administrator*. The person responsible for the administration of this Article XIII, which in the city shall be the director of T&ES or his/her designee.
- (B) *Alexandria water quality volume default*. The volume equal to the first 0.5 inch of runoff multiplied by the total impervious area of the site as defined herein.
- (C) *Applicant*. A person who has submitted, or plans to submit, a plan of development or an exception request to the city or a person seeking approval from the city for any activity that is regulated under this article.
- (D) *Best management practice (BMP)*. Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices, including both structural and nonstructural practices, to prevent or reduce the pollution of surface water and groundwater systems from the impacts of land-disturbing activities.
- (E) *Buffer area*. An area of natural or established vegetation managed to protect other components of a resource protection area and state waters from significant degradation due to land disturbances. To effectively perform this function, the buffer area will achieve a 75 percent reduction of sediments and a 40 percent reduction of nutrients. A 100-foot wide buffer area shall be considered to meet this standard.
- (F) *Chesapeake Bay Preservation Act land-disturbing activity*. A land-disturbing activity including clearing, grading, or excavation that results in a land disturbance equal or greater than 2,500 square feet and less than one acre in all areas of the city designated as subject to the regulations adopted pursuant to the Chesapeake Bay Preservation Act, Code of Virginia, § 62.1-44.15:67 et seq.
- (G) *Clean Water Act* or *CWA* means the federal Clean Water Act (33 U.S.C § 1251 et seq.), formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, or any subsequent revisions thereto.
- (H) *Common plan of development or sale*. A contiguous area where separate and distinct construction activities may be taking place at different times on different schedules.
- (I) *Control measure*. Any best management practice or stormwater management facility, or other method used to minimize the discharge of pollutants to state waters.
- (J) *Department (DEQ)*. The Virginia Department of Environmental Quality.
- (K) *Development*. Land disturbance and the resulting landform associated with the construction or substantial alteration of residential, commercial, industrial, institutional, recreational, transportation, or utility facilities or structures or the clearing of land for non-agricultural or non-silvicultural purposes.
- (L) *Director of T&ES/Director of P&Z*. Director of T&ES means the director of transportation and environmental services of the City of Alexandria. Director of P&Z means the director of planning and zoning of the City of Alexandria.
- (M) *Floodway*. All lands as defined in subsection 6-303(K) of this ordinance.
- (N) *General permit*. The state permit titled General Virginia Pollutant Discharge Elimination System (VPDES) Permit for Discharges of Stormwater from Construction Activities found in 9VAC25-880 et seq.) of the Virginia Stormwater Management Regulations authorizing a category of discharges under the federal Clean Water Act and the Virginia Stormwater Management Act within a geographical area of the Commonwealth of Virginia.

- (O) *Highly erodible soils.* Soils (excluding vegetation) with an erodibility index (EI) from sheet and rill erosion equal to or greater than eight. The erodibility index for any soil is defined as the product of the formula $RKLS/T$, where K is the soil susceptibility to water erosion in the surface layer; R is the rainfall and runoff; LS is the combined effects of slope length and steepness; and T is the soil loss tolerance.
- (P) *Highly permeable soils.* Soils with a given potential to transmit water through the soil profile. Highly permeable soils are identified as any soil having a permeability equal to or greater than six inches of water movement per hour in any part of the soil profile to a depth of 72 inches (permeability groups "rapid" and "very rapid"), as found in the "National Soil Survey Handbook" of November 1996 in the "Field Office Technical Guide" of the U.S. Dept. of Agriculture Natural Resources Conversation Service.
- (Q) *Impervious cover.* A surface composed of any material that significantly impedes or prevents natural infiltration of water into the soil. Impervious surfaces include, but are not limited to: roofs, buildings, streets, parking areas, and any concrete, asphalt, or compacted gravel surface.
- (R) *Intermittent stream.* Any natural or engineered channel (measured from top of bank) with flowing water during certain times of the year, when groundwater provides for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow. Acceptable methodologies for establishing the presence of an intermittent stream will be provided by the director of T&ES pursuant to subsection 13-104(C).
- (S) *Isolated wetlands of minimal ecological value.* Those wetlands, as defined in 9VAC25-210-10, that:
- (i) Do not have a surface water connection to other state waters;
 - (ii) Are less than one-tenth of an acre in size;
 - (iii) Are not located in a Federal Emergency Management Agency designated 100-year floodplain;
 - (iv) Are not identified by the Virginia Natural Heritage Program as a rare or state significant natural community;
 - (v) Are not forested; and
 - (vi) Do not contain listed federal or state threatened or endangered species.
- (T) *Land disturbance or land-disturbing activity.* A manmade change to the land surface that potentially changes its runoff characteristics, including clearing, grading, filling, or excavation.
- (U) *Layout.* A conceptual drawing sufficient to provide for the specified stormwater management facilities required at the time of approval.
- (V) *Minor modification.* An amendment to an existing general permit before its expiration not requiring extensive review and evaluation including, but not limited to, changes in EPA promulgated test protocols, increasing monitoring frequency requirements, changes in sampling locations, and changes to compliance dates within the overall compliance schedules. A minor general permit modification or amendment does not substantially alter general permit conditions, substantially increase or decrease the amount of surface water impacts, increase the size of the operation, or reduce the capacity of the facility to protect human health or the environment.
- (W) *Natural channel.* A nontidal waterway that is part of the natural topography and is generally characterized as being irregular in cross section with a meandering course.
- (X) *Nonpoint source pollution.* Contamination from diffuse sources that is not regulated as point source pollution under Section 402 of the Clean Water Act.
- (Y) *Nontidal wetlands.* Those wetlands, other than tidal wetlands, that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under

normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, as defined by the U.S. Environmental Protection Agency pursuant to Section 404 of the Federal Clean Water Act, in 33 CFR 328.3b.

- (Z) *Operator*. The owner or operator of any facility or activity subject to regulation under this Article XIII.
- (AA) *Permittee*. The person to whom a state permit is issued, including any owner or operator whose construction site is covered under a state construction general permit.
- (BB) *Person*. Any individual, corporation, partnership, association, municipality, commission, or political subdivision, of a state, governmental body, including federal, state, or local entity as applicable, any interstate body or any other legal entity.
- (CC) *Pre-development*. The land use that exists at the time that plans for the development are submitted to the city. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the land use at the time the first item is submitted shall establish pre-development conditions.
- (DD) *Post-development*. Conditions that reasonably may be expected or anticipated to exist after completion of the development activity on a specific site or tract of land.
- (EE) *Public road*. For the purpose of this Article XIII, public road means a publicly owned road designed and constructed in accordance with water quality protection criteria at least as stringent as requirements applicable to the Virginia Department of Transportation, including regulations promulgated pursuant to (i) the Erosion and Sediment Control Law (Section 64.1-44.15:51 et seq. of the Code of Virginia) and (ii) the Virginia Stormwater Management Act (Section 64.1-44.15:24 et seq. of the Code of Virginia). This definition includes those roads where the Virginia Department of Transportation exercises direct supervision over the design or construction activities, or both, and cases where roads are constructed or maintained, or both, by the City of Alexandria.
- (FF) *Redevelopment*. The process of developing land that is or has been previously developed.
- (GG) *Regulations*. The Virginia Stormwater Management Program (VSMP) Permit Regulations, 9VAC-25-870, as amended.
- (HH) *Restored stormwater conveyance system*. A stormwater conveyance system that has been designed and constructed using natural channel design concepts. Restored stormwater conveyance systems include the main channel and the flood-prone area adjacent to the main channel.
- (II) *Resource management area (RMA)*. A Chesapeake Bay Preservation Area overlay designation as further defined in section 13-105(C).
- (JJ) *Resource protection area (RPA)*. A Chesapeake Bay Preservation Area overlay designation as further defined in section 13-105(B).
- (KK) *Shoreline*. Land contiguous to a body of water.
- (LL) *Site*. The land or water area where any facility or land-disturbing activity is physically located or conducted, including adjacent land used or preserved in connection with the facility or land-disturbing activity. Areas channelward of mean low water in tidal Virginia shall not be considered part of a site. The following shall be used for determining water quality and water quantity requirements in sections 13-109(E) and (F): For projects disturbing less than 50 percent of the tax parcel, (or if multiple parcels are involved, the land subject to the application), the disturbed area shall constitute the site; for projects disturbing greater than or equal to 50 percent of the tax parcel (or if multiple parcels are involved, the land subject to the application), the entire tax parcel shall constitute the site.
- (MM) *State*. The Commonwealth of Virginia.

- (NN) *State permit*. An approval to conduct a land-disturbing activity issued by the Virginia State Water Control Board in the form of a state stormwater individual permit or coverage issued under a state general permit or an approval issued by the Virginia State Water Control Board for stormwater discharges from an MS4. Under these state permits, the state imposes and enforces requirements pursuant to the federal Clean Water Act, the Virginia Stormwater Management Act, and their attendant regulations.
- (OO) *State Water Control Law*. Chapter 3.1 (62.1-44.2 et seq.) of Title 62.1 of the Code of Virginia.
- (PP) *State waters*. All waters on the surface or in the ground, wholly or partially within or bordering the commonwealth or within its jurisdiction, including wetlands.
- (QQ) *Stormwater*. Precipitation that is discharged across the land surface or through conveyances to one or more waterways and that may include stormwater runoff, snow melt runoff, and surface runoff and drainage.
- (RR) *Stormwater management facility*. A device that controls stormwater runoff and changes the characteristics of that runoff including, but not limited to, the quantity and quality, the period of release or the velocity of flow.
- (SS) *Stormwater management plan*. A document or documents containing material describing methods for complying with the requirements of section 13-114 of this article.
- (TT) *Stormwater pollution prevention plan (SWPPP)*. A document that is prepared in accordance with section 13-113 of this article and good engineering practices and that identifies potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the construction site, and otherwise meet the requirements of this article. In addition the document shall identify and require the implementation of control measures, and shall include, but not be limited to the inclusion of, or the incorporation by reference of, an approved erosion and sediment control plan, and a pollution prevention plan.
- (UU) *Subdivision*. Means the same as defined in section 2-197.2 of the Alexandria Zoning Ordinance.
- (VV) *Substantial alteration*. Expansion or modification of a building or development that would result in land disturbance exceeding an area of 2,500 square feet in the resource management area only.
- (WW) *Tidal shore*. Land contiguous to a tidal body of water between the mean low water level and the mean high water level.
- (XX) *Tidal wetlands*. Vegetated and nonvegetated wetlands as defined in Section 28.2-1300 of the Code of Virginia.
- (YY) *Top of Bank*. To the extent applicable, top of bank shall be determined on prevailing professional standards and the best professional judgment of the director.
- (ZZ) *Total maximum daily load (TMDL)*. The sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources, natural background loading, and a margin of safety. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. The TMDL process provides for point versus nonpoint source trade-offs.
- (AAA) *Use*. Any activity on the land other than development, including, but not limited to agriculture, horticulture, and silviculture.
- (BBB) *Virginia Stormwater Management Act*. Article 2.3 (§ 62.1-44.15:24 et seq.) of Chapter 3.1 of Title 62.1 of the Code of Virginia.
- (CCC) *Virginia Stormwater BMP Clearinghouse website*. A website that contains detailed design standards and specifications for control measures that may be used in Virginia to comply with the requirements of the Virginia Stormwater Management Act and regulations.
- (DDD) *Virginia Stormwater Management Program (VSMP)*. A program approved by the Virginia State Water Control Board that has been established by a locality to manage the quality and

quantity of runoff resulting from land-disturbing activities and shall include such items as local ordinances, rules, permits, requirements, annual standards and specifications, policies and guidelines, technical materials, and requirements for plan review, inspection and enforcement, where authorized in this article, and evaluation consistent with the requirements of this article and associated regulations.

- (EEE) *VSMP authority.* An authority approved by the Virginia State Water Control Board to operate a VSMP. For the purposes of this article, the city is the VSMP authority.
- (FFF) *VSMP authority permit.* An approval to conduct a land-disturbing activity issued by the city for the initiation of a land-disturbing activity after evidence of general permit coverage has been provided where applicable. In the City of Alexandria a VSMP authority permit is not a separate permit. Rather, the issuance of a building, land use, or other land development permit is contingent on a proposed land-disturbing activity meeting all VSMP authority permit requirements in 9VAC-25-870 and the requirements of this article.
- (GGG) *Water body with perennial flow.* A body of water that flows in a natural or engineered channel year-round during a year of normal precipitation. This includes, but is not limited to streams, estuaries, and tidal embayments and may include drainage ditches or channels constructed in wetlands or from former natural drainage ways that convey perennial flow. Lakes and ponds, through which a perennial stream flows, are a part of the perennial stream. Generally, the water table is located above the streambed for most of the year and groundwater is the primary source for stream flow. The width of the perennial stream extends from top-of-bank to top-of-bank of the channel or to the limits of the normal water level for a pond or lake when there is no definable top-of-bank. Acceptable methodologies for establishing the presence of a water body with perennial flow will be provided by the director of T&ES pursuant to subsection 13-104(C).
- (HHH) *Water-dependent facility.* A development of land that cannot exist outside of the resource protection area and must be located on the shoreline by reason of the intrinsic nature of its operation. These facilities include, but are not limited to:
- (i) Ports;
 - (ii) The intake and outfall structures of power plants, water treatment plants, sewage treatment plants, and storm sewers;
 - (iii) Marinas and other boat docking facilities;
 - (iv) Beaches and other public water-oriented recreation areas; and
 - (v) Fisheries or other marine resources facilities.
- (III) *Watershed.* The total drainage area contributing runoff to a single point.
- (JJJ) *Wetlands.* Tidal and nontidal wetlands.

13-104 - Administration.

- (A) *Responsibility for administration.* The director of T&ES, or his/her designee, is charged with responsibility for the administration of this Article XIII.
- (B) *Duties and authority.* In the administration of this Article XIII the duties and authority of the director of T&ES shall include, without limitation:
- (1) Receiving applications for plan of development approval;
 - (2) Reviewing applications to determine if they contain all information required and necessary for a determination of their merit;
 - (3) Reviewing applications to determine their compliance with the provisions and intent of this Article XIII and their merit;

- (4) Docketing items for hearing before the planning commission and conferring with the city manager to schedule public hearings before the city council as necessary on applications;
 - (5) Preparing a staff report for each application;
 - (6) Interpreting the provisions of this Article XIII to ensure that its intent is carried out.
- (C) *Rules, regulations, and procedures.* The director of T&ES shall promulgate rules, regulations, and procedures for the administration and enforcement of this Article XIII and shall promulgate rules, regulations, and procedures for the processing of applications that ensure full review, comment, and recommendations on each application by the department of transportation and environmental services. The city manager shall promulgate rules and procedures for review by other departments of applications, where such review is determined to be necessary or desirable and such procedures may include the establishment of a development review committee composed of departments of the city whose expertise is necessary or desirable in the review of applications. All such rules, regulations, and procedures shall be transmitted to the city council at the time of issuance.
- (D) *Establishment of fees.* The director of T&ES shall by general rule approved by city council establish a schedule of fees required for each application under this Article XIII to be paid at the time an application is submitted. The schedule of fees shall include those authorized by 9VAC25-870-700 et seq. The schedule of fees is set per approved council docket.
- (E) *Responsibility for enforcement.* The director of T&ES shall have the authority and the responsibility of section 11-200 and section 13-126 to ensure that all buildings and structures and the use of all land complies with the provisions of this Article XIII.
- (F) The director of T&ES shall review, approve, disapprove, or approve with modifications or conditions or both the following elements of the plan of development:
- (1) The environmental site assessment, required pursuant to section 13-112
 - (2) The stormwater management plan, required pursuant to section 13-114 and approved in accordance with section 13-115
 - (3) The erosion and sediment control plan required pursuant to section 5-4-1.
 - (4) The water quality impact assessment, if required, pursuant to section 13-117
 - (5) Compliance of the plan of development with section 13-106 through section 13-110
- (G) The director of T&ES shall have the authority and the responsibility to enforce the requirement that a permittee must develop, implement, and keep at the site for inspection a stormwater pollution prevention plan that meets the requirements set forth in section 13-113 and a pollution prevention plan that meets the requirements set forth in section 13-116
- (H) Review and decision on applications for exceptions shall be as provided in section 13-119
- (I) Review and decision on applications for modifications to noncomplying land uses and structures shall be as provided in section 13-122
- (J) Review and decision on applications for exemptions shall be as provided in section 13-123
- (K) Review and decision on the remaining elements of the plan of development shall be as provided in the regulations of this ordinance and the City Code applicable to each such element.

13-105 - Designation of Chesapeake Bay Preservation Area Overlay District.

- (A) All land within the corporate limits of the city is designated as a Chesapeake Bay Preservation Area (CBPA). The CBPA is divided into resource protection areas and resource management areas. The regulations set forth in this Article XIII shall apply as an overlay district, and shall supersede any zoning, land use, or land development regulation of the City Code that is inconsistent with the provisions of this Article XIII.

- (B) Resource protection areas (RPAs) consist of sensitive land that has either an intrinsic water quality value due to the ecological and biological processes such land performs or that is sensitive to uses or activities such that the use results in significant degradation to the quality of state waters. In their natural condition, these lands provide for the removal, reduction, or assimilation of nonpoint source pollution entering the bay and its tributaries. An area of land that includes any one of the following land types shall be considered to be within the RPA:
- (1) Tidal wetlands;
 - (2) Tidal shores;
 - (3) Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow;
 - (4) A buffer area of 100 feet (measured from top of bank) located adjacent to and landward of the components listed in subsections (1) through (3) above and along both sides of any water body with perennial flow. The full buffer area shall be designated as the landward component of the RPA notwithstanding the presence of permitted uses, encroachments, and vegetation clearing in compliance with this Article XIII.
- (C) Resource management areas (RMAs) include land that, if improperly used or developed, has a potential for causing significant water quality degradation or for diminishing the functional value of the RPA. Therefore, all lands in the city, not included in the RPA, shall constitute the RMA since all such land drains through natural or manmade conveyances to the Potomac River and Chesapeake Bay.

13-106 - Establishment of CBPA boundaries.

- (A) Chesapeake Bay Preservation Area boundaries are established by text, as provided in section 13-105. The city shall publish and update in a manner established by the director of T&ES pursuant to section 13-104(C) a general map depicting the location of identified CBPA features. However, in all cases it is the burden of the applicant to identify CBPA features and to delineate the appropriate RPA boundaries in accordance with the development review process required pursuant to section 13-111, or if no development review process is required, then through the environmental site assessment pursuant to section 13-112
- (B) Any property owner wishing to change the depiction of an RPA feature on the general map may conduct an environmental site assessment in section 13-112 and submit it to the director of T&ES. The director of T&ES may accept, modify, or reject the RPA delineation based on the evidence presented by the property owner and in consideration of all other available information.
- (C) In the event that a site-specific RPA boundary delineation is contested by an applicant or property owner, the applicant or property owner may request a meeting with the director of T&ES to review the decision. Requests for the meeting shall be made no more than 30 calendar days after notification of a modification or rejection of a proposed RPA delineation. The director of T&ES will preside over the meeting of the involved parties and reconsider the decision. The meeting participants will be notified by the director of T&ES within 30 calendar days after the meeting of the result of the reconsideration.

13-107 - Development, redevelopment, and uses permitted in RPAs.

The following criteria shall apply in RPAs unless the development, redevelopment, use, or land-disturbing activity is exempted under section 13-123 or granted an exception pursuant to section 13-119. All development, redevelopment, and uses within the RPA must comply with the performance criteria provided in section 13-109

- (A) The following are permitted within the RPA provided they do not require development, redevelopment, structures, grading, fill, draining, or dredging:
 - (1) Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife;
 - (2) Passive recreational activities, including but not limited to fishing, bird watching, hiking, boating, horseback riding, swimming, and canoeing; and
 - (3) Educational activities and scientific research.
- (B) The following are permitted within the RPA if approved by the director of T&ES. A water quality impact assessment may be required by the director of T&ES in accordance with section 13-117 if the project is located within an environmentally sensitive area, or is of sufficient scale to affect water quality.
 - (1) Repair and maintenance of existing piers, walkways, observation decks, wildlife management shelters, boathouses, and other similar water-related structures provided that there is no increase in structure footprint and that any required excavating and filling results in a land-disturbing activity of 2,500 square feet or less;
 - (2) Boardwalks, trails, and pathways;
 - (3) Historic preservation and archeological activities; and
 - (4) Repair and maintenance of existing flood control and stormwater management facilities.
- (C) The following, if permitted in the underlying zone, are allowed within the RPA if approved by the director of T&ES and provided that a water quality impact assessment is performed and accepted by the director of T&ES as complete in accordance with section 13-117
 - (1) A new or expanded water-dependent facility may be allowed provided that the following criteria are met:
 - (a) It does not conflict with the city master plan;
 - (b) Any non-water-dependent component is located outside of the RPA; and
 - (c) Access to the water-dependent facility is provided with the minimum disturbance necessary, and where practical, a single point of access is provided.
 - (2) Redevelopment may be allowed provided that the following criteria are met:
 - (a) There is no increase in impervious surface cover;
 - (b) There is no further encroachment within the RPA; and
 - (c) The proposed redevelopment is consistent with the city master plan.
 - (3) Public flood control and stormwater management facilities that drain or treat water from multiple development projects or from a significant portion of a watershed, may be allowed provided that:
 - (a) The director of T&ES has conclusively established that the location of the facility within the RPA is the optimum location;
 - (b) The size of the facility is the minimum necessary for flood control or stormwater quality treatment, or both;
 - (c) All applicable permits for construction in state or federal waters must be obtained from the appropriate state and federal agencies, such as the Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission; and
 - (d) The facility is consistent with a city stormwater management program approved by the Virginia State Water Control Board.

- (4) Stream restoration projects and shoreline erosion control and stabilization projects, including the removal of trees and woody vegetation, employment of necessary restoration, control, and stabilization techniques, and establishment of appropriate vegetation, may be allowed in accordance with the best available technical advice and applicable permit conditions or requirements if approved by the city arborist.
- (D) In order to maintain the functional value of the RPA buffer area, existing vegetation may be removed if approved by the director of T&ES and only to provide for reasonable sight lines, access paths, general woodlot management, and best management practices to prevent upland erosion and concentrated flows of stormwater, as follows:
 - (1) Trees may be pruned or removed as necessary to provide for sight lines and vistas, provided that where removed, they shall be replaced with other vegetation that is equally effective in retarding runoff, preventing erosion, and filtering nonpoint source pollution from runoff. Replacement vegetation shall require the approval of the director of T&ES, in consultation with the department of recreation, parks, and cultural activities and the department of planning and zoning.
 - (2) Any path shall be constructed and surfaced so as to effectively control erosion.
 - (3) Dead, diseased, or dying trees or shrubbery and noxious weeds (such as Johnson grass, kudzu, and multiflora rose) may be removed and thinning of trees may be conducted. The director of T&ES may approve a long term management plan for a specific RPA that complies with professionally recognized management practices.
- (E) The following encroachments, if permitted in the underlying zone, are allowed to the RPA buffer area if approved by the director of T&ES and provided that a water quality impact assessment is performed and accepted by the director of T&ES as complete in accordance with section 13-117
 - (1) When the application of the buffer area would result in the loss of a buildable area on a lot or parcel recorded prior to October 1, 1989, encroachments into the buffer area may be approved by the director of T&ES in accordance with the following criteria:
 - (a) Encroachments into the buffer area shall be the minimum necessary to achieve a reasonable buildable area for a principal structure and necessary utilities;
 - (b) Where practicable, a vegetated area that will maximize water quality protection, mitigate the effects of the buffer encroachment, and is equal to the area of encroachment into the buffer area shall be established elsewhere on the lot; and
 - (c) The encroachment may not extend into the seaward 50 feet of the buffer area.
 - (2) When the application of the buffer area would result in the loss of buildable area on a lot or parcel recorded between October 1, 1989 and March 1, 2002, encroachments into the buffer area may be approved by the director of T&ES in accordance with the following criteria:
 - (a) The lot or parcel was created as a result of a legal process conducted in conformity with the city's subdivision regulations;
 - (b) Any conditions or mitigation measures imposed through previously approved exceptions must be met;
 - (c) If a stormwater BMP was previously required, the BMP shall be evaluated to determine if it continues to function effectively, and, if necessary, the BMP shall be reestablished or repaired and maintained as required; and
 - (d) The criteria in (1) above of this section shall be met.

Development, redevelopment, and uses authorized by the underlying zone are permitted in the RMA provided such activity is carried out in accordance with all applicable criteria in this Article XIII. The director of T&ES may, due to the unique characteristics of a site or the intensity of the proposed development, redevelopment, or use require a water quality impact assessment as provided in subsections 13-117(C) and (D).

13-109 - General performance requirements for CBPAs.

The director of T&ES shall approve development, redevelopment, uses, or land-disturbing activities in the CBPA only if it is found that the activity is in compliance with this Article XIII and that the applicant has demonstrated, by a preponderance of the evidence, that the proposed development, redevelopment, use, or land-disturbing activity meets or exceeds the following standards.

- (A) No more land shall be disturbed than is necessary to provide for the proposed use, development, or redevelopment.
- (B) Indigenous vegetation shall be preserved to the maximum extent practicable consistent with the use, development, or redevelopment proposed.
- (C) Development or redevelopment shall minimize impervious cover consistent with the proposed use or development.
- (D) The proposed development or redevelopment shall comply with section 5-4-1 et seq. of the City Code (erosion and sediment control).
- (E) All development, redevelopment, and uses disturbing greater than 2,500 square feet shall meet the following storm water quality management performance requirements. For purposes of this section, the following shall be used to define the site area for determining water quality requirements: for projects disturbing less than 50 percent of the tax parcel (or if multiple parcels are involved, the land subject to the application), the disturbed area shall be used as the site area; for projects disturbing greater than or equal to 50 percent of the tax parcel (or if multiple parcels are involved, the land subject to the application), the entire tax parcel shall be used as the site area.
 - (1) The entire water quality volume from the site shall be treated. When the development, redevelopment, or use constitutes disturbing only a small portion of a tax map parcel greater than five acres in size, the director of T&ES may establish criteria for allowing the parcel to be divided into sub-basins.
 - (2) Single-family residences separately built and disturbing less than one acre and not part of a larger common plan of development or sale, including additions or modifications to existing single-family detached residential structures are exempt from subsections (4) and (5) below. The Alexandria water quality volume default requirement in subsection (6) still applies.
 - (3) In order to protect the quality of state waters located within the City of Alexandria and to control the discharge of stormwater pollutants from regulated activities, the following minimum design criteria and statewide standards for stormwater management, per 9VAC25-870-63 shall be applied.
 - (4) New development. The total phosphorus load of new development projects shall not exceed 0.41 pounds per acre per year, as calculated pursuant to this section.
 - (5) Development of prior developed lands:
 - (a) For land-disturbing activities disturbing greater than or equal to one acre that results in no net increase in impervious cover from the pre-development condition, the total

phosphorus load shall be reduced at least 20 percent below the pre-development total phosphorus load.

- (b) For regulated land-disturbing activities disturbing less than one acre that results in no net increase in impervious cover from the pre-development condition, the total phosphorus load shall be reduced at least ten percent below the predevelopment total phosphorus load.
 - (c) For land-disturbing activities that result in a net increase in impervious cover over the pre-development conditions, the design criteria for new development shall be applied to the increased impervious area. Depending on the area of disturbance, the criteria of subsections (a) or (b) above shall be applied to the remainder of the site.
 - (d) In lieu of subsection (c), the total phosphorus load of a linear development project as defined in 9VAC25-870-10 occurring on prior developed lands shall be reduced 20 percent below the predevelopment total phosphorus load.
 - (e) The total phosphorus load shall not be required to be reduced below the applicable standard for new development unless standards applied by other parts of this article require a more stringent standard.
- (6) For new development and development on prior developed lands in subsections (4) and (5) above, the entire Alexandria water quality volume default from the site shall be treated, or the requirements must be met consistent with section 13-110
 - (7) Compliance with subsections (4) and (5) above shall be determined using the runoff reduction method and through the use of stormwater BMPs established in 9VAC25-870-65 or found at the Virginia BMP Clearinghouse website, except as may be limited in accordance with policies established by the director of T&ES in accordance with subsection 13-104(C).
 - (8) Compliance with subsections (4) and (5) may be achieved by the applicant in accordance with off-site compliance options in 9VAC25-870-69 under the following circumstances:
 - (a) Less than five acres of land will be disturbed;
 - (b) The post-construction phosphorus control requirement is less than ten pounds per year; or
 - (c) At least 75 percent of the required phosphorus nutrient reductions are achieved on-site. If at least 75 percent of the required phosphorus nutrient reductions cannot be met on-site, and the operator can demonstrate to the satisfaction of the director of T&ES that (i) alternative site designs have been considered that may accommodate on-site best management practices, (ii) on-site best management practices have been considered in alternative site designs to the maximum extent practicable, (iii) appropriate on-site best management practices will be implemented, and (iv) full compliance with post-development nonpoint nutrient runoff compliance requirements cannot practicably be met on-site, then the required phosphorus nutrient reductions may be achieved, in whole or in part, through the use of off-site compliance options.
 - (9) When the requirements of subsections (4) and (5) have otherwise been met, the requirement to treat the entire Alexandria water quality volume default in subsection (6) may be achieved in accordance with alternative stormwater management equivalency options presented in section 13-110
 - (10) Notwithstanding those exemptions granted under section 13-123, all such land-disturbing activities shall be subject to the design storm and hydrologic methods set out in 9VAC25-870-72, linear development controls in 9VAC25-870-76, and criteria associated with stormwater impoundment structures in 9VAC25-870-85.
 - (11) Notwithstanding the above requirements, any site with (a) an intermittent stream contained within an existing natural channel, or (b) a non-tidal wetland that does not meet the criteria

for designation as a resource protection area in section 13-105(B), must meet the following additional water quality performance criteria:

- (a) Measures must be taken to protect these features from direct stormwater runoff from impervious surfaces and to preserve their water quality functions.
 - (b) A 50-foot wide vegetated area preserved where present, or established where not present, on the outward edge of these features shall be considered a sufficient BMP to meet this standard if the vegetated area is designed to prevent erosion and scouring.
 - (c) The BMP requirement in (b) above may alternatively be met through the use of a smaller vegetated area in combination with equivalent on-site stormwater treatment and/or equivalent off-site options presented in section 13-110 if approved by the director of T&ES.
 - (d) Development, redevelopment, uses, and land-disturbing activities allowed in the vegetated area shall be the same as those allowed in RPAs as described in section 13-107. Delineation of the vegetated area shall be accomplished in the manner prescribed in section 13-106
 - (e) The director of T&ES may waive the requirements of (b) above if the non-tidal wetland is demonstrated to the director of T&ES's satisfaction that it qualifies as an isolated wetland of minimal ecological value defined in section 13-103(K).
- (F) All development and redevelopment shall meet the following channel protection and flood protection requirements. Compliance with this section satisfies the stormwater management requirements of section 5-4-7(c)(4) of the City Code (erosion and sediment control):
- (1) Channel protection. Concentrated stormwater flow shall be released into a stormwater conveyance system and shall meet the criteria of this section, where applicable, from the point of discharge to a point within the limits of analysis in subsection (d).
 - (a) *Manmade stormwater conveyance systems.* When stormwater from a development is discharged to a manmade stormwater conveyance system, following the land-disturbing activity, either:
 - (i) The manmade stormwater conveyance shall convey the post-development peak flow rate from the two-year 24-hour storm event without causing erosion of the system. Detention of stormwater or downstream improvements may be incorporated into the land-disturbing activity to meet this criterion, at the discretion of the director; or
 - (ii) The peak discharge requirements for concentrated stormwater flow to natural stormwater conveyance systems in subsection (c) shall be met.
 - (b) *Restored stormwater conveyance systems.* When stormwater from a development is discharged to a restored stormwater conveyance system that has been restored using natural design concepts, following the land-disturbing activity, either:
 - (i) The development shall be consistent, in combination with other stormwater runoff, with the design parameters of the restored stormwater conveyance system that is functioning in accordance with the design objectives; or
 - (ii) The peak discharge requirements for concentrated stormwater flow to natural stormwater conveyance systems in subsection (c) shall be met.
 - (c) *Natural stormwater conveyance systems.* When stormwater from a development is discharged to a natural stormwater conveyance system the maximum peak flow rate from the one-year 24-hour storm following the land-disturbing activity shall be calculated either:
 - (i) In accordance with the following methodology:

$$Q_{\text{Developed}} \leq \text{I.F.} * (Q_{\text{Pre-developed}} * RV_{\text{Pre-developed}}) / RV_{\text{Developed}}$$

Under no condition shall $Q_{\text{Developed}}$ be greater than $Q_{\text{Pre-developed}}$ nor shall $Q_{\text{Developed}}$ be required to be less than that calculated in the equation $(Q_{\text{Forest}} * RV_{\text{Forest}}) / RV_{\text{Developed}}$; where

I.F. (Improvement Factor) equals 0.8 for sites > 1 acre or 0.9 for sites ≤ 1 acre.

$Q_{\text{Developed}}$ = The allowable peak flow rate of runoff from the developed site.

$RV_{\text{Developed}}$ = The volume of runoff from the site in the developed condition.

$Q_{\text{Pre-developed}}$ = The peak flow rate of runoff from the site in the pre-developed condition.

$RV_{\text{Pre-developed}}$ = The volume of runoff from the site in pre-developed condition.

Q_{Forest} = The peak flow rate of runoff from the site in a forested condition.

RV_{Forest} = The volume of runoff from the site in a forested condition.

- (d) *Limits of analysis.* Unless subsection (c) is utilized to show compliance with the channel protection criteria, stormwater conveyance systems shall be analyzed for compliance with channel protection criteria to a point where either:
 - (i) Based on land area, the site's contributing drainage area is less than or equal to 1.0 percent of the total watershed area; or
 - (ii) Based on peak flow rate, the site's peak flow rate from the one-year 24-hour storm is less than or equal to 1.0 percent of the existing peak flow rate for the one-year 24-hour storm event prior to implementation of any stormwater quantity control measures.
- (2) Flood protection. Concentrated stormwater flow shall be released into a stormwater conveyance system and shall meet one of the following criteria as demonstrated by the use of acceptable hydrologic and hydraulic methodologies:
 - (a) Concentrated stormwater flow to stormwater conveyance systems that currently do not experience localized flooding during the ten-year 24-hour storm event:
 - (i) The point of discharge releases stormwater into a stormwater conveyance system that, following the land-disturbing activity, confines the post-development peak flow rate from the ten-year 24-hour storm event within the stormwater conveyance system; and
 - (ii) Unless waived under (iv), the post-development peak flow rate for the ten-year 24-hour storm event shall be less than the predevelopment peak flow rate from the ten-year 24-hour storm event.
 - (iii) Detention of stormwater or downstream improvements may be incorporated into the approved land-disturbing activity to meet (i) and (ii), at the discretion of the director of T&ES.
 - (iv) A waiver of the detention requirements and/or the downstream stormwater limits of analysis in subsection (2)(c) may be granted by the director based on factors including but not limited to the project's location in the watershed.
 - (b) Concentrated stormwater flow to stormwater conveyance systems that currently experience localized flooding during the ten-year 24-hour storm event: The point of discharge either:
 - (i) Confines the post-development peak flow rate from the ten-year 24-hour storm event within the stormwater conveyance system to avoid the localized flooding.

Additional detention of stormwater or downstream improvements may be incorporated into the approved land-disturbing activity to meet this criterion, at the discretion of the director; or

- (ii) Releases a post-development peak flow rate for the ten-year 24-hour storm event that is less than the pre-development peak flow rate from the ten-year 24-hour storm event.
 - (iii) A waiver of the detention requirement may be granted by the director of T&ES based on factors including but not limited to the amount of stormwater runoff generated, the severity of flooding issues in the watershed and/or the lack of adequacy of the existing conveyance system.
- (c) Limits of analysis. Stormwater conveyance systems shall be analyzed for compliance with flood protection criteria to a point where:
 - (i) The site's contributing drainage area is less than or equal to 1.0 percent of the total watershed area draining to a point of analysis in the downstream stormwater conveyance system;
 - (ii) Based on peak flow rate, the site's peak flow rate from the ten-year 24-hour storm even is less than or equal to 1.0 percent to the existing peak flow rate from the ten-year 24-hour storm event prior to the implementation of any stormwater quantity control measures; or,
 - (iii) The stormwater conveyance system enters a mapped floodplain or other flood-prone area adopted in accordance with section 6-300 et seq. of the City Code.
- (d) Alternative limits of analysis. If section 13-109(F)(2)(a)(i) and (ii) or 109(F)(2)(b)(ii) are utilized to comply with the flood protection criteria the downstream limit of analysis shall extend to:
 - (i) A point that is at least 150 feet downstream of a point where the receiving pipe or channel is joined by another that has a drainage area that is at least 90 percent of the size of the first drainage area at the point of confluence; or
 - (ii) A point that is at least 150 feet downstream of a point where the drainage area is 360 acres or greater.
- (3) Increased volumes of sheet flow resulting from pervious or disconnected impervious areas, or from physical spreading of concentrated flow through level spreaders, must be identified and evaluated for potential impacts on down-gradient properties or resources. Increased volumes of sheet flow that will cause or contribute to erosion, sedimentation, or flooding of down gradient properties or resources shall be diverted to a stormwater management facility or a stormwater conveyance system that conveys the runoff without causing down-gradient erosion, sedimentation, or flooding. If all runoff from the site is sheet flow and the conditions of this subsection are met, no further water quantity controls are required.
- (4) For the purposes of computing pre-development runoff, all pervious lands on the site shall be assumed to be in good hydrologic condition in accordance with the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) standards, regardless of conditions existing at the time of computation. Pre-development runoff calculations utilizing other hydrologic conditions may be utilized provided that it is demonstrated to and approved by the director of T&ES that actual site conditions warrant such considerations.
- (5) Pre-development and post-development runoff characteristics and site hydrology shall be verified by site inspections, topographic surveys, available soil mapping or studies, and calculations consistent with good engineering practices. Guidance provided in the Virginia Stormwater Management Handbook and by the Virginia Stormwater BMP Clearinghouse shall be considered appropriate practices.

- (6) The director of T&ES may waive these requirements provided in subsection (2) in cases where stormwater detention would conflict with the city's flood management programs. The waiver may be granted based on factors including, but not limited to, the project's location in the watershed and/or off-site improvement to upgrade the downstream conveyance systems.
- (7) Post-development concentrated surface waters shall not be discharged on adjoining property, unless an easement expressly authorizing such discharge has been granted by the owner of the affected land.
- (G) It shall be the responsibility of the owner of any stormwater quality or quantity management facility established to meet the requirements of (E) and (F) above to provide adequate maintenance for proper functioning of the system. The following requirements apply to all existing and future facilities constructed in the city:
 - (1) The owner shall enter into a stormwater BMP maintenance agreement (agreement) with the city that provides all necessary provisions to ensure compliance with this article, to include access for inspections. The agreement shall require the provision of long-term maintenance of stormwater BMPs and provide for inspections. Facility-specific inspection frequency and maintenance requirements shall be set by city policy and procedures. The BMP maintenance agreement shall be set forth in an instrument recorded in the city land records. The stormwater BMP maintenance agreement form will be provided by the director of T&ES in accordance with section 13-104(C).
 - (2) The owner shall prepare and submit inspection and maintenance reports to the city in accordance with city policies and procedures for the specific facility. Inspection and maintenance reports shall be signed by the owner of the facility or an individual acting on the owner's behalf, a registered professional, or a person who holds an appropriate certificate of competence from the board. Such certification shall state that the facility is being adequately maintained as designed.
 - (3) The owner shall provide the city with access to the facility to perform quality assurance inspections and follow up inspections to ensure adequate maintenance has been conducted a minimum of once every five years, or on a more frequent basis at the discretion of the director. If inadequate maintenance is observed by the city, the owner will be notified and an adequate period specified for corrective action. If the corrective action is not performed within the specified time, the city may perform the necessary corrections and bill the property owner. In cases of repeated instances of failure to perform required maintenance, sanctions may be imposed as provided in section 13-126

13-110 - Alexandria water quality improvement fund and alternative stormwater management equivalency options.

- (A) The director of T&ES, in consultation with the director of planning and zoning and the director of recreation, parks, and cultural activities, as appropriate, shall establish equivalent stormwater management options that may be used to meet the requirements of section 13-109(E)(6) and section 13-109(E)(11)(c). Options shall include the following:
 - (1) Specific on-site and off-site improvements that have been determined by the director of T&ES to achieve a pollutant removal equal to or greater than what would have been achieved had a traditional BMP been required; and
 - (2) Monetary contributions to the Alexandria water quality improvement fund provided for in subsection (C) below.
- (B) Improvements may include, but not necessarily be limited to, stream restoration, stream daylighting, removal of existing RPA encroachments, RPA enhancement, street cleaning, combined sewer system separation, and permanent preservation of open space areas beyond the city's baseline open space preservation requirements.

- (C) Monetary contributions to the Alexandria water quality improvement fund shall be calculated by the director of T&ES based on estimates of the cost of actually installing and maintaining on-site BMPs through their life cycle. These costs will be updated on a periodic basis by the director of T&ES as required.
- (D) In determining whether to allow equivalent stormwater options, as well as the appropriate combination of on-site and off-site controls, the director of T&ES shall take into consideration the following:
 - (1) Whether there is an opportunity to control impervious surface cover that comes into routine contact with vehicles, including but not limited to parking areas, streets and roadways except for public roads exempt under section 13-109; loading docks; equipment, material, and waste storage areas; and vehicle fueling, washing, storage, maintenance, and repair areas;
 - (2) Whether other environmental and public benefits such as site design, open space, tree preservation, and landscaping can be achieved;
 - (3) Whether on-site stormwater detention would conflict with the city's flood management programs;
 - (4) Whether site-specific constraints would make on-site treatment difficult or impractical, especially when the site consists of a single-family residence separately built and not part of a subdivision;
 - (5) Whether there are opportunities readily available for off-site improvements within the general vicinity of the site that will provide greater water quality benefits than on-site improvements;
 - (6) Whether there are opportunities to control specific pollutants of concern identified within the watershed or subwatershed, including but not limited to those identified by the department of environmental quality in its most recent 303(d) Total Maximum Daily Load (TMDL) Priority List;
 - (7) Whether there are opportunities to implement the Water Quality Management Supplement to the city master plan and the city's Virginia Stormwater Management Permit (VSMP) for its municipally owned separate storm sewer system discharges as issued by the Department of Environmental Quality; and
 - (8) Whether the cost of implementing available off-site improvements is reasonably equivalent to that of a monetary contribution;
 - (9) Single family residential development projects that are exempt from the water quality requirements of section 13-123(A) are considered eligible to contribute to the Alexandria water quality improvement fund in section 13-110(A)(2) to meet the Alexandria water quality volume default requirement in section 13-107(E)(3) with no further consideration of items (1) through (8) above.
- (E) Final approval of equivalency options used for a particular site shall be made at the sole discretion of the director of T&ES.
- (F) The city hereby establishes a dedicated fund known as the Alexandria water quality improvement fund to be used in conjunction with this Article XIII, the water quality management supplement to the city master plan, and the city's municipal separate storm sewer system (MS4) general permit issued by the Virginia Department of Environmental Quality. The purpose of the fund is to reduce nonpoint source pollution and improve stream quality and habitat through appropriate activities including, but not limited to: new BMPs, retrofit of existing BMPs, riparian enhancements, stream bank stabilization and/or restoration, public education and outreach, demonstration projects, water quality monitoring and analysis, and other activities to meet TMDL requirements.

- (A) Any development, redevelopment, or use exceeding 2,500 square feet of land disturbance within the CBPA shall be subject to the development review process outlined in subsection (C) below prior to any clearing of the site, or the issuance of any building, land use, or land development permit. However, any land-disturbing activity less than one acre within the CBPA shall not be required to complete a registration statement for coverage under the general permit, but shall be subject to all aspects of the development review process, to include the water quality and quantity criteria in subsections 13-109(E) and (F). Further, any detached single-family home construction within or outside of a common plan of development or sale that is not otherwise exempt shall not be required to complete a registration statement, but shall adhere to all other requirements of the general permit and all applicable requirements of this article.
- (B) Notwithstanding subsection (A) above, all development, redevelopment, or use in the RPA, or in the vegetated area established under subsection 13-109(E)(11), regardless of the amount of land disturbance, shall be subject to the review criteria established in section 13-107 prior to any clearing of the site or the issuance of any building, land use, or land development permit.
- (C) The development review process application shall consist of the plans and studies identified below, such application forms as the director of T&ES shall require and the appropriate fees, which together shall constitute the plan of development. The plans and studies identified in this section may be coordinated or combined with other required submission materials, as deemed appropriate by the director of T&ES. The plan of development shall contain the following elements:
- (1) A site plan in accordance with the provisions of section 11-400 of this ordinance or other applicable law and, if applicable, a subdivision plat in accordance with the provisions of Chapter 5, Title 7 of the City Code;
 - (2) An environmental site assessment as detailed in section 13-112
 - (3) A landscape plan in accordance with the provisions of section 113-117(D)(3) of this ordinance certified by qualified design professionals practicing within their areas of competence;
 - (4) A stormwater management plan as detailed in section 13-114 and approved in accordance with section 13-115
 - (5) An erosion and sediment control plan in accordance with the provisions of Chapter 4, Title 5 of the City Code;
 - (6) Completion of the stormwater pollution prevention plan checklist referring to standard plan language included in the final plan; and
 - (7) For all land disturbance, development, or redevelopment within an RPA, or within an environmentally sensitive area as determined by the director of T&ES pursuant to section 13-117(C) or section 13-117(D), or for an exception under section 13-119, a water quality impact assessment as detailed in section 13-117
- (D) No development, redevelopment, uses, or land disturbing activities may commence until the director of T&ES has approved the final site plan and a state construction general permit has been issued based on approval of a complete and accurate registration statement signed and submitted by the operator, if such registration statement is required. The following shall be required for final site plan approval:
- (1) Evidence that a general VPDES permit for discharges of stormwater from construction activities has been issued, if such general permit is required;
 - (2) Approval by the director of T&ES of all requirements as outlined in subsection (C) above;
 - (3) Payment of all applicable fees in accordance with section 113-104(D);
 - (4) Demonstration to the satisfaction of the director of T&ES, through the review of the final site plan application and attendant materials and supporting documentation, that all land

clearing, construction, disturbance, land development, and drainage will be done in accordance with this Article XIII.

- (5) Review of a signed standard maintenance and monitoring agreement for the long term maintenance of stormwater BMPs, and proof of recordation per section 13-109(G).
- (E) As a condition of final plan approval, any development, redevelopment, or land-disturbing activity of one acre or greater must develop prior to the land-disturbing activity, implement, and keep at the site for inspection a stormwater pollution prevention plan that meets the requirements set forth in section 13-113, which includes a pollution prevention plan that meets the requirements set forth in section 13-116

13-112 - Environmental site assessment.

- (A) The environmental site assessment shall clearly delineate the individual components of the RPA as well as the total geographic extent of the RPA as defined in section 13-105(B) through a methodology approved by the director of T&ES under the authority of section 13-104(C).
- (B) The environmental site assessment shall also clearly describe, map, or explain the following:
 - (1) Intermittent streams contained within a natural channel through a methodology approved by the director of T&ES under the authority of section 13-104(C).
 - (2) Highly erodible and highly permeable soils if available from existing public documents or documents available to the applicant;
 - (3) Steep slopes greater than 15 percent in grade;
 - (4) Known areas of contamination;
 - (5) Springs, seeps, and related features; and
 - (6) A listing of all wetlands permits required by law (evidence that such permits have been obtained shall be presented to the director of T&ES before permits will be issued to allow commencement of grading or other on-site activity).
- (C) Wetlands delineations shall be performed consistent with current procedures promulgated by the U.S. Army Corps of Engineers and the Environmental Protection Agency.
- (D) Site-specific evaluations or delineations of RPA boundaries shall be certified by a professional engineer, land surveyor, landscape architect, soil scientist, or wetland delineator certified or licensed to practice in the Commonwealth of Virginia.
- (E) In the event that no part of the site plan area contains any elements described in subsection (A) or (B) above, the applicant and the party responsible for the evaluation may, in lieu of providing an environmental site assessment plan, so certify the finding, in writing and under oath, to the director of T&ES. Any permit issued in reliance upon such a certification where said certification is factually inaccurate or incorrect shall be void ab initio. Such invalidity shall be in addition to any other penalties which may be imposed upon the makers of such certification.
- (F) The environmental site assessment shall be drawn at the same scale as the preliminary site plan or subdivision plat, and shall be certified as complete and accurate by a professional engineer or a certified land surveyor. This requirement may be waived by the director of T&ES when the proposed use or development would result in less than 5,000 square feet of disturbed area.

13-113 - Stormwater pollution prevention plan.

- (A) The stormwater pollution prevention plan (SWPPP) shall include the content specified in 9VAC25-870-54, which includes but is not limited to, an approved erosion and sediment control plan, an approved stormwater management plan, a pollution prevention plan for regulated land-disturbing activities, and a description of any additional control measures necessary to address a TMDL. The SWPPP must also comply with the requirements and general information set forth

in 9VAC25-880-70 Section II of the general VPDES permit for discharges of stormwater from construction activities (construction general permit).

- (B) The SWPPP shall be amended by the operator whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants to state waters that is not addressed in the existing SWPPP.
- (C) The SWPPP must be maintained by the operator at a central location on-site. If an on-site location is not available, notice of the SWPPP's location must be posted near the main entrance at the construction site. Operators shall make the SWPPP available for public review in accordance with Section II of the general permit, either electronically or in hard copy.

13-114 - Stormwater management plan.

- (A) The stormwater management plan must apply the stormwater technical requirements of section 13-109 to the entire site. Individual lots in a new residential, commercial, or industrial development or sale, including those developed under subsequent owners, shall not be considered separate land-disturbing activities. Instead, the common plan, as a whole, shall be considered to be a single land disturbing activity. The plan shall consider all sources of surface runoff and all sources of subsurface and groundwater flows converted to surface runoff. The plan shall contain maps, charts, graphs, tables, photographs, narrative descriptions, explanations, calculations, and citations to supporting references as appropriate to communicate the information required by this Article XIII. At a minimum, the stormwater management plan must contain the following:
 - (1) Information on the type and location of stormwater discharges; information on the features to which stormwater is being discharged including surface waters, and the pre-development and post-development drainage areas;
 - (2) Contact information including the name, address, and telephone number of the owner and the tax reference and parcel number of the property or properties affected;
 - (3) A narrative that includes a description of current site conditions and final site conditions;
 - (4) A general description of the proposed stormwater management facilities and a maintenance agreement and inspection schedule in accordance with section 13-109(G) to ensure that the facilities will be operated and maintained after construction is complete;
 - (5) Information on the proposed stormwater management facilities, including:
 - (a) The type of facilities;
 - (b) Location, including geographic coordinates;
 - (c) Acres treated; and
 - (d) The surface waters into which the facility will discharge.
 - (6) Hydrologic and hydraulic computations, including runoff characteristics.
 - (7) Documentation and calculations verifying compliance with the water quality and water quantity requirements of section 13-109
 - (8) A map or maps of the site that depicts the topography of the site and includes:
 - (a) All contributing drainage areas;
 - (b) Existing streams, ponds, culverts, ditches, wetlands, other water bodies, and floodplains;
 - (c) Soil types, relevant geological formations, forest cover, and other vegetative areas;
 - (d) Current land use including existing structures, roads, and locations of known utilities and easements;

- (e) Sufficient information on adjoining parcels to assess the impacts of stormwater from the site on these parcels;
 - (f) The limits of clearing and grading, and the proposed drainage patterns on the site;
 - (g) Proposed buildings, roads, parking areas, utilities, and stormwater management facilities; and
 - (h) Proposed land use with tabulation of the percentage of surface area to be adapted to various uses, including but not limited to planned locations of utilities, roads, and easements.
- (B) If an operator intends to meet the water quality requirements set forth in section 13-109(E) through the use of off-site credits in accordance with section 13-109(E)(8), then a letter of availability from the off-site provider must be included. Approved off-site options must achieve the necessary reductions prior to the commencement of the applicant's land-disturbing activity except as otherwise allowed by Section 62.1-44.15:35 of the Code of Virginia.
 - (C) If the operator intends to utilize the alternative stormwater management equivalency options in section 13-110 to meet the Alexandria water quality volume default in section 13-109(E)(6) or the additional water quality performance criteria of section 13-109(E)(8), then the operator must submit a narrative and any required calculations.
 - (D) Site specific facilities for phased projects shall be designed for the ultimate development of the contributing project watershed based on zoning, comprehensive plans, local public facility master plans, or other similar planning documents.
 - (E) Elements of stormwater management plans that include activities regulated under Chapter 4 of Title 54.1 of the Code of Virginia be appropriately sealed and signed by professional registered in the Commonwealth of Virginia and performed in accordance with procedures, consistent with good engineering practice, established by the director of T&ES pursuant to section 13-104(C).
 - (F) All stormwater designs that require analysis of pressure hydraulic systems and/or inclusion and design of flow control structures must be sealed by a professional engineer registered in the Commonwealth of Virginia.
 - (G) An as-built drawing for permanent stormwater management facilities shall be submitted to the director of T&ES in accordance with section 13-114. The as-built drawing shall be appropriately sealed and signed by a professional registered in the Commonwealth of Virginia certifying that the stormwater facilities have been constructed in accordance with the approved plan.
 - (H) The plan shall establish a long-term schedule for inspection and maintenance of stormwater management facilities that includes all maintenance requirements and persons responsible for performing maintenance. If the designated maintenance responsibility is with a party other than the City of Alexandria, then a maintenance agreement shall be executed between the responsible party and the city in accordance with section 13-109(G).

13-115 - Stormwater management plan review.

- (A) The director of T&ES shall review stormwater management plans and shall approve or disapprove a stormwater management plan in accordance with the following:
 - (1) The director of T&ES shall determine the completeness of the plan in accordance with section 13-114 and shall notify the applicant, in writing, of such determination within 15 calendar days of receipt. If the plan is deemed incomplete, the above written notification shall contain the reasons the plan is deemed incomplete.
 - (2) The director of T&ES shall have an additional 60 calendar days from the date of the communication of completeness to review the plan, except that if a determination of completeness is not made and communicated within 15 days, then the plan shall be deemed complete and the director of T&ES shall have 60 calendar days from the date of submission to review the plan.

- (3) The director of T&ES shall review any plan that has been previously disapproved within 45 calendar days of the date of re-submission.
- (4) During the review period, the plan shall be approved or disapproved and the decision communicated in writing to the person responsible for the land-disturbing activity or the designated agent. If the plan is not approved, the reasons for not approving the plan shall be provided in writing. Approval or denial shall be based on the plan's compliance with the requirements of this article.
- (5) If a plan meeting all requirements of this article is submitted and no action is taken within the time frame provided in this subsection, the plan will be deemed approved.
- (B) Approved stormwater management plans may be modified as follows:
 - (1) Modifications to an approved stormwater management plan shall be allowed only after review and written approval by the director of T&ES. The director of T&ES shall have 60 calendar days to respond in writing either approving or disapproving such request.
 - (2) The director of T&ES may require that an approved stormwater management plan be amended, within a time prescribed by the director of T&ES, to address any deficiencies noted during inspection.
- (C) The director of T&ES shall require the submission of an as-built drawing for permanent stormwater facilities. The director of T&ES may elect not to require as-built drawings for stormwater management facilities for which recorded maintenance agreements are not required.

13-116 - Pollution prevention plan.

- (A) The pollution prevention plan is required by 9VAC25-870-56 and shall be developed, implemented, and updated as necessary, and must detail the design, installation, implementation, and maintenance of effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:
 - (1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
 - (2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater; and
 - (3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- (B) The pollution prevention plan shall include effective best management practices to prohibit the following discharges:
 - (1) Wastewater from washout of concrete, unless managed by an appropriate control;
 - (2) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials;
 - (3) Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
 - (4) Soaps or solvents used in vehicle and equipment washing.
- (C) Discharges from dewatering activities, including discharges from dewatering of trenches or excavations, are prohibited unless managed by appropriate controls.

13-117 - Water quality impact assessment.

- (A) The purpose of the water quality impact assessment is to:
- (1) Identify the impacts of a proposed use, development, or redevelopment on water quality and lands within an RPA;
 - (2) Ensure that, where a use, development, or redevelopment does take place within an RPA, it will be located on those portions of the site and in a manner that will be least disruptive to the natural functions of the RPA;
 - (3) Identify the impacts of a proposed use, development, or redevelopment within an RMA where the director of T&ES has determined that the proximity to an RPA, the environmentally sensitive characteristics of the site, or the proposed scale and intensity has the potential to affect water quality;
 - (4) Specify mitigation that will address water quality protection under the foregoing circumstances or under an exception under section 13-116
- (B) A water quality impact assessment is required for any proposed development or redevelopment in the RPA, except that at the discretion of the director of T&ES a water quality impact assessment may not be required if the activity is addressed under section 13-107(A), section 13-107(B), or section 13-107(D). There are two types of water quality impact assessments: water quality minor impact assessments and water quality major impact assessments.
- (C) A water quality minor impact assessment is required for development or redevelopment within RPAs or under an exception which involves 5,000 or less square feet of land disturbance; or for any development or redevelopment within the RMA that involves 5,000 or less square feet of land disturbance adjacent to an RPA, if required by the director of T&ES due to the presence or proximity of wetlands, potential for harmful discharge of contaminants from the property, or slopes greater than 15 percent which are proposed to be disturbed. A minor assessment must demonstrate that the undisturbed buffer area, enhanced vegetative plantings, and any required BMPs will result in the removal of no less than 75 percent of sediments and 40 percent of nutrients from post-development stormwater runoff and that will retard runoff, prevent erosion, and filter nonpoint source pollution the equivalent of the full undisturbed buffer area. Such an assessment shall include a site plan that shows the following:
- (1) Location and description of the existing characteristics and conditions of the components of the RPA as identified in section 13-105(B) and delineated in the environmental site assessment required by section 13-112
 - (2) Location and nature of the proposed encroachment into the buffer area, including: type of paving material; areas of clearing or grading; location of any structures, drives, or other impervious cover; and sewage disposal systems or reserve drainfield sites;
 - (3) Type and location of enhanced vegetation and/or proposed BMPs to mitigate the proposed encroachment;
 - (4) Location of existing vegetation on-site, including the number and types of trees and other vegetation to be removed in the buffer to accommodate the encroachment or modification; and
 - (5) Revegetation plan that supplements the existing buffer vegetation in a manner that provides for pollutant removal, erosion, and runoff control. The revegetation plan will incorporate native vegetation to the extent practicable.
- (D) A water quality major impact assessment is required for development or redevelopment within RPAs or under an exception that involves more than 5,000 square feet of land disturbance; or for any development or redevelopment within the RMA which involves more than 5,000 square feet of land disturbance adjacent to an RPA, if required by the director of T&ES due to the presence or proximity of wetlands, potential for harmful discharge of contaminants from the property, or slopes greater than 15 percent which are proposed to be disturbed. The following elements shall be included in a water quality major impact assessment:

- (1) All of the information required in a water quality minor impact assessment as specified in subsection (C) above;
- (2) A hydrogeological element that:
 - (a) Describes the existing topography, soils, hydrology, and geology of the site;
 - (b) Describes the impacts of the proposed development or redevelopment on topography, soils, hydrology, and geology on the site;
 - (c) Indicates the following:
 - (i) Disturbance or reduction of wetlands and justification for such action;
 - (ii) Disruption or reductions in the supply of water to wetlands, streams, lakes, rivers, or other water bodies;
 - (iii) Disruptions to existing hydrology, including wetland and stream circulation patterns;
 - (iv) Source location and description of proposed fill material (may, at applicant's risk, be provided when the U.S. Army Corps of Engineers permit application is submitted);
 - (v) Location of dredge materials and location of dumping area for such materials (may, at applicant's risk, be provided when the U.S. Army Corps of Engineers permit application is submitted);
 - (vi) Locations of and impacts on adjacent shellfish beds, submerged aquatic vegetation, and fish spawning areas (may, at applicant's risk, be provided when the U.S. Army Corps of Engineers permit application is submitted);
 - (vii) The estimated pre- and post-development pollutant loads in runoff as delineated in the stormwater management plan required by section 13-113
 - (viii) Estimation of percent increase in impervious surface on the site and identification of the type(s) of surfacing materials to be used;
 - (ix) Percent of the site to be cleared for the project;
 - (x) Anticipated duration and phasing schedule of the construction period; and
 - (xi) Listing of all requisite permits from all applicable agencies necessary to develop the project;
 - (d) Describes the proposed mitigation measures for the potential hydrogeological impacts. Potential mitigation measures include:
 - (i) Proposed erosion and sediment control measures, which may include minimizing the extent of the cleared area, perimeter controls, reduction of runoff velocities, measures to stabilize disturbed areas, schedule and personnel for site inspection;
 - (ii) Proposed stormwater management system;
 - (iii) Creation of wetlands to replace those lost; and
 - (iv) Minimizing cut and fill.
- (3) A supplement to the landscape plan that:
 - (a) Identifies and delineates the location of all significant plant material, including all trees on site six inches or greater diameter breast height. Where there are groups of trees, stands shall be outlined.
 - (b) Describes the impacts the development or use will have on the existing vegetation. Information should include:

- (i) General limits of clearing based on all anticipated improvements, including buildings, drives, and utilities;
 - (ii) Clear delineation of all trees which will be removed; and
 - (iii) Description of plant species to be disturbed or removed.
- (c) Describes the potential measures for mitigation. Possible mitigation measures include:
 - (i) Replanting schedule for trees and other significant vegetation removed for construction, including a list of possible plants and trees to be used;
 - (ii) Demonstration that the proposed plan will preserve to the greatest extent possible any significant trees and vegetation on the site and will provide maximum erosion and overland flow benefits from such vegetation;
 - (iii) Demonstration that indigenous plants are to be used to the greatest extent possible; and
 - (iv) Identification of the natural processes and ecological relationships inherent at the site, and an assessment of the impact of the proposed use and development of the land, including mitigating measures proposed in the water quality impact assessment, on these processes and relationships.
- (E) A water quality minor impact assessment shall be certified as complete and accurate by a professional engineer or a certified land surveyor. The additional elements required in a water quality major impact assessment shall be certified as complete and accurate by a professional engineer and by a qualified environmental scientist.
- (F) For any water quality impact assessment to proceed, the director of T&ES must first approve it for completeness and compliance with this Article XIII. Upon receipt of any water quality major impact assessment application, the director of T&ES may determine if review by the department is warranted and may request the department to review the assessment and respond with written comments. Any comments by the department will be incorporated into the final review by the director of T&ES provided that such comments are provided by the department within 90 days of the request.
 - (1) For a water quality minor impact assessment, the director of T&ES shall base this finding on the following criteria:
 - (a) The necessity of the proposed encroachment and the ability to place improvements elsewhere on the site to avoid disturbance of the buffer area;
 - (b) Impervious surface is minimized;
 - (c) Proposed BMPs, where required achieve the requisite reductions in pollutant loadings;
 - (d) The development, as proposed, meets the purpose and intent of these regulations;
 - (e) The cumulative impact of the proposed development when considered in relation to other development within the RPA in the vicinity, both existing and proposed, will not result in a significant degradation of water quality.
 - (2) For a water quality major impact assessment, the director of T&ES shall base this finding on the following criteria:
 - (a) Within any RPA, the proposed development is water-dependent or constitutes redevelopment;
 - (b) The disturbance of wetlands shall comply with state and federal regulations;
 - (c) The development will not result in significant disruption of the hydrology of the site;

- (d) The development will not result in significant degradation of water quality that could adversely affect aquatic vegetation or life;
- (e) The development will not result in unnecessary destruction of plant material on site;
- (f) Proposed erosion and sediment control measures are adequate to achieve the required reductions in runoff, and prevent off-site transport of sediment during and after construction;
- (g) Proposed stormwater management measures are adequate to control the stormwater runoff to achieve the required standard for pollutant control; and
- (h) Proposed revegetation of disturbed areas will provide adequate erosion and sediment control benefits, as determined by the director of T&ES.

13-118 - Final plans.

- (A) Final site plans and subdivision plats subject to this Article XIII for all lands within the CBPA shall include the following additional information:
 - (1) A copy showing issuance of all wetlands permits required by law; and
 - (2) A BMP inspection schedule and maintenance agreement between the city and applicant as deemed necessary and appropriate by the director of T&ES to ensure proper maintenance of best management practices in order to assure their continued performance.
- (B) The following installation and bonding requirements shall be met.
 - (1) Where buffer areas, landscaping, stormwater management facilities or other specifications of an approved plan are required, no certificate of occupancy shall be issued until the installation of required plant materials or facilities is completed, in accordance with the approved site plan.
 - (2) When the occupancy of a structure is desired prior to the completion of the required landscaping, stormwater management facilities, or other specifications of an approved plan, a certificate of occupancy may be issued only if the applicant provides to the city a surety bond or equivalent satisfactory to the director of T&ES in amount equal to the remaining plant materials, related materials, and installation costs of the required landscaping or facilities and/or maintenance costs for any required stormwater management facilities during the construction period.
 - (3) Unless otherwise approved by the director of T&ES for a phased project, all required landscaping shall be installed and approved by the first planting season following issuance of a certificate of occupancy or the surety bond may be forfeited to the city.
 - (4) Unless otherwise approved by the director of T&ES for a phased project, all required stormwater management facilities or other specifications shall be installed and approved within 18 months of project commencement. Should the applicant fail, after proper notice, to initiate, complete or maintain appropriate actions required by the approved plan, the surety bond may be forfeited to the city. The city may collect from the applicant the amount by which the reasonable cost of required actions exceeds the amount of surety held.
 - (5) After all required actions of the approved site plan have been completed, the applicant must submit a written request for a final inspection. If the requirements of the approved plan have been completed to the satisfaction of the director of T&ES, such unexpended or unobligated portion of the surety bond held shall be refunded to the applicant or terminated within 60 days following the receipt of the applicant's request for final inspection. The director of T&ES may require a certificate of substantial completion from a professional engineer or licensed surveyor before making a final inspection.

13-119 - Exceptions.

- (A) Unless otherwise provided in this Article XIII, a request for an exception to the requirements of this Article XIII shall be made pursuant to this section in writing to the director of T&ES. The request shall identify the impacts of the proposed exception on water quality and on lands within the RMA and RPA through the performance of a water quality impact assessment that complies with the provisions of section 13-117 to the extent applicable.
- (B) For exceptions to the provisions of sections 13-109 and 13-124 other than those detailed in section 13-107, the director of T&ES shall review the request for an exception and the water quality impact assessment and may grant the exception with such conditions and safeguards as deemed necessary to further the purpose and intent of this Article XIII if the director of T&ES finds that the applicant has demonstrated by a preponderance of the evidence that:
 - (1) Granting the exception will not confer upon the applicant any special privileges that are denied to other property owners in the CBPA overlay district;
 - (2) The exception is not based upon conditions or circumstances that are self-created or self-imposed, nor does the exception arise from conditions or circumstances either permitted or noncomplying that are related to adjacent parcels;
 - (3) The exception is the minimum necessary to afford relief;
 - (4) The exception will be consistent with the purpose and intent of the overlay district, and not injurious to water quality, the neighborhood or otherwise detrimental to the public welfare;
 - (5) Reasonable and appropriate conditions are imposed, as warranted, to prevent the allowed activity from causing degradation of water quality.
- (C) Economic hardship alone is not sufficient reason to grant an exception from the requirements of this Article XIII.
- (D) Under no circumstances shall the city allow an exception to the requirement that a qualified land-disturbing activity obtain the required construction general permit or other state permits.
- (E) Under no circumstances shall the city allow the use of a BMP not found on the Virginia Stormwater BMP Clearinghouse website, or as applicable for projects subject to 9VAC25-870 Part II.C. Notwithstanding, this shall not preclude the director of T&ES from placing reasonable limitations on a BMP on the Virginia Stormwater BMP Clearinghouse website.
- (F) Exceptions to the requirements for phosphorus reductions required under section 13-109(E)(4) and (5) will not be allowed unless off-site options available through 9VAC25-870-69 have been considered and found not available.
- (G) Exceptions to section 13-107 shall be heard and determined by the planning commission after hearing and notice pursuant to section 11-300. The schedule for reviewing the exception shall be made by the director of T&ES and the director of planning and zoning. The schedule shall provide, in a manner approved by the city manager, reasonable opportunity for review and action by the environmental policy commission prior to any formal action by the planning commission so that any recommendation of support, denial, or modification can be considered as part of the planning commission's deliberations.
- (H) A record of all exceptions granted shall be maintained by the director of T&ES.
- (I) Any person aggrieved by a decision of the director of T&ES or planning commission under this section may appeal as provided in section 13-120

13-120 - Appeals.

- (A) Any person aggrieved by a final case decision of the director of T&ES in the administration, interpretation or enforcement of this Article XIII or on any application hereunder may appeal such decision to the planning commission, by filing a notice of appeal, in writing, stating the grounds of appeal, with the secretary of the planning commission within 14 days of the issuance of such decision; provided, that any person aggrieved, who had no actual knowledge of the

issuance of such decision, may file an appeal within 14 days of the last day on which notice provided in section 11-300 or section 11-408 of this ordinance is given for any element of the plan of development. A notice of appeal shall be accompanied by a filing fee of \$100.00.

- (B) The planning commission shall conduct a public hearing on any appeal filed pursuant to section 13-120(A), notice for which shall be provided in accordance with the applicable provisions of section 11-300 of this ordinance. Following the conclusion of the hearing, the planning commission may affirm, reverse or modify the decision of the director of T&ES, or vacate the decision and remand the matter to the director of T&ES for further consideration.
- (C) Any person aggrieved by a decision of the planning commission issued pursuant to section 13-119(D) or section 13-120(B), or the city manager, may appeal the decision to the city council, by filing a notice of appeal, in writing, stating the grounds of appeal, with the city clerk within 14 days of the issuance of the decision.
- (D) The city council shall conduct a public hearing on any appeal filed pursuant to subsection (C), notice for which shall be provided in accordance with the applicable provisions of section 11-300 of this ordinance. Following the conclusion of the hearing, the council may affirm, reverse or modify the decision of the commission, or vacate the decision and remand the matter to the planning commission or the director of T&ES for further consideration.
- (E) Notwithstanding the provisions of subsections (A) through (D) above, an applicant or any aggrieved party who elects to appeal shall appeal the director of T&ES's decision of approval or disapproval of a stormwater management plan application by filing a notice of appeal with the director of T&ES within 30 days after service of such decision. The filing of such notice, and proceedings thereafter, shall be governed by Part 2A of the Rules of the Supreme Court of Virginia, and judicial review shall be had in the Circuit Court of the City of Alexandria on the record previously established, and shall otherwise be in accordance with the Administrative Process Act, Virginia Code Sections 9-6.14:1 et seq.

13-121 - Hearings.

- (A) Any applicant, permittee, or person subject to this article aggrieved by any action of the city taken without a formal hearing, or by inaction of the city, may demand in writing a formal hearing by the planning commission, provided a petition requesting such hearing is filed with the director of T&ES within 30 days after notice of such action is given by the director of T&ES.
- (B) The hearings held under this section shall be conducted by the planning commission at a regular or special meeting of the planning commission or by at least one member of the planning commission designated by the planning commission to conduct such hearings on behalf of the planning commission at any other time and place authorized by the planning commission.
- (C) A verbatim record of the proceedings of such hearing shall be taken and filed with the planning commission. Depositions may be taken and read as in actions at law.
- (D) The planning commission or its designated member, as the case may be, shall have power to issue subpoenas and subpoenas duces tecum, and at the request of any party shall issue such subpoenas. The failure of a witness without legal excuse to appear or testify or to produce documents shall be acted upon by the city whose action may include the procurement of an order of enforcement from the circuit court. Witnesses who are subpoenaed shall receive the same fees and reimbursements for mileage as in civil actions.

13-122 - Noncomplying land uses and structures.

- (A) Any land use or structure lawfully existing on January 28, 1992, or any land use or structure that exists at the time of any amendment to this Article XIII that does not comply as a result of the amendment, shall be deemed noncomplying.

- (B) Any proposed land use or structure for which an applicant has a an approved preliminary site plan, building permit, subdivision plan, plot plan, or special use permit on or before February 23, 2004 that would not comply under proposed amendments to Article XIII pursuant to the December 10, 2001 amendments to 9VAC10-20-10 et seq. may be constructed in accordance with the provisions of this Article XIII in effect at the time of submittal, except that the proposed land use or structure shall comply with any new requirements to the maximum extent practicable. Upon completion, the land use or structure shall be deemed noncomplying.
- (C) Any application for a proposed land use or structure that is not exempt pursuant to (A) or (B) above shall comply with amendments to Article XIII adopted pursuant to the December 10, 2001 amendments to 9VAC10-20-10 et seq.
- (D) Nothing in this Article XIII shall prevent the reconstruction of noncomplying structures destroyed by any casualty unless the reconstruction is otherwise restricted by this ordinance or other portions of the City Code. Such reconstruction shall occur within two years after the destruction or damage and there shall be no increase in the amount of impervious area and no further encroachment in the RPA, to the extent possible by sound engineering practices.
- (E) Any noncomplying land use or structure may continue and be maintained, including renovation, remodeling, and other cosmetic alterations provided that the activity does not result in land disturbance and that there is no net increase in nonpoint source pollutant load.
- (F) A request to enlarge or expand a principal noncomplying structure within an RPA buffer area may be approved by the director of T&ES through an administrative process provided that:
 - (a) The principal structure remains intact and the modification is compatible in bulk and scale to those in the surrounding neighborhood area, as determined by the director of planning and zoning. If these criteria are not met, the modification shall be subject to the exception request process requirements of section 13-119
 - (b) There will be no increase in nonpoint source pollution load.
 - (c) Any development or land disturbance exceeding and area of 2,500 square feet complies with section 5-4-1 et seq. of the City Code (erosion and sediment control).
 - (d) The director of T&ES finds that the request is consistent with the criteria provided in section 13-116(B).
- (G) A request to construct or modify a non-attached noncomplying accessory structure, or a request to modify or expand a noncomplying land use (e.g., a parking area, boat storage area, active recreation fields, etc.), shall only be approved through the exceptions process outlined in section 13-119

13-123 - Exemptions.

- (A) The following uses, which may involve structures, fill, flooding, draining, dredging, or excavating, shall be exempted from section 13-107, to the extent specifically enumerated in these regulations and not prohibited by any other provision of the City Code or applicable law and subject to the director of T&ES review and approval of design and construction plans for compliance with this Article XIII:
 - (1) Construction, installation, operation and maintenance of electric, natural gas, fiber-optic, and telephone lines, railroads and public roads constructed by VDOT or by or for the City of Alexandria in accordance with VDOT standards (built separately from development projects regulated under section 13-106), and their appurtenant structures. The exemption of public roads is further conditioned on the alignments being designed to prevent or otherwise minimize the encroachment in the RPA buffer and to minimize adverse effects on water quality.
 - (2) Construction, installation, and maintenance of water, sewer, natural gas, underground telecommunications and cable television lines owned or permitted by the City of Alexandria

or a service authority shall be exempt from the requirements of section 13-107 provided that:

- (a) To the degree possible, the location of such utilities and facilities shall be outside RPAs;
 - (b) No more land shall be disturbed than is necessary to provide for the proposed utility installation; and
 - (c) All such construction, installation, and maintenance of such utilities and facilities shall be in compliance with all applicable state and federal requirements and permits, and designed and conducted in a manner that protects water quality.
- (B) Notwithstanding any other provisions of this article, the following uses, which may involve structures, fill, flooding, draining, dredging, or excavating, shall be exempt from this article:
- (1) Land-disturbing activities less than 2,500 square feet not part of a larger common plan of development or sale, except as may be required in section 13-107 for CPBA;
 - (2) Land disturbances associated with permitted surface or deep mining operations and projects, or oil and gas operations and projects conducted under the provisions of Title 45.1 of the Code of Virginia;
 - (3) Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original construction of a project. The paving of existing road with a compacted or impervious surface and re-establishment of existing ditches and shoulders is deemed routine maintenance if performed in accordance with this subsection;
 - (4) Conducting land-disturbing activities in response to a public emergency where the related work requires immediate authorization to avoid imminent endangerment to human health or the environment. In such situations, the director of T&ES shall be advised of the disturbance within seven days of commencing the land-disturbing activity and compliance with this Article XIII shall be required within 30 days of commencing the land-disturbing activity;
 - (5) Land clearing for agricultural or silvicultural purposes, and related activities, in accordance with Section 62.1-44.15:34.C.2 of the Code of Virginia; and
 - (6) Activities under a state or federal reclamation program to return an abandoned property to an agricultural or open land use.
- (C) Discharges to a sanitary sewer or a combined sewer shall be exempt from section 13-113 (stormwater pollution prevention plan), section 13-116 (pollution prevention plan), and the requirement to obtain a VSMP construction general permit unless otherwise required by City Code or state or federal law . All other applicable portions of this article shall continue to apply.
- (D) Single-family residences separately built and disturbing less than one acre and not part of a larger common plan of development or sale, including additions or modifications to existing single-family detached residential structures are exempt from the water quality requirements of sections 109(E)(3) and (E)(4) except the Alexandria water quality volume default requirement in section 13-109(E)(5) still applies.

13-124 - Time limits on applicability of design criteria and grandfathering.

- (A) The time limits on applicability of design criteria shall apply provided:
- (1) Land-disturbing activities that obtain an initial state permit or commence land disturbance prior to July 1, 2014 shall be conducted in accordance with the technical criteria in 9VAC-25-870-93 through 9VAC25-870-99. Such projects shall remain subject to these technical criteria for two additional state construction general permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board.

- (2) Land-disturbing activities that obtain an initial state construction general permit on or after July 1, 2014 shall be conducted in accordance with the technical criteria in sections 13-109(E) and (F), except for as provided in subsection (B) below, and shall remain subject to this technical criteria for two additional state permit cycles. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board.
- (3) Nothing in this section shall preclude an operator from constructing to a more stringent standard at his/her discretion.
- (B) Grandfathering provisions established in 9VAC25-870-48 shall apply to this article as applicable. Any land-disturbing activity shall be considered grandfathered by the VSMP authority and shall be subject to the technical criteria of 9VAC25-870-93 through 9VAC25-870-99, provided:
 - (1) A proffered or conditional zoning plan, zoning with a plan of development, preliminary or final subdivision plat, preliminary or final site plan, or any document determined by the locality to be equivalent thereto (i) was approved by the locality prior to July 1, 2012, (ii) provided a layout as defined in 9VAC25-870-10, (iii) will comply with the technical criteria of 9VAC25-870-93 through 99, (iv) has not been subsequently modified or amended in a manner resulting in an increase in the amount of phosphorus leaving each point of discharge, and such that there is no increase in the volume or rate of runoff;
 - (2) A state permit has not been issued prior to July 1, 2014; and
 - (3) Land disturbance did not commence prior to July 1, 2014.
- (C) Locality, state and federal projects shall be considered grandfathered and shall be subject to the technical criteria in 9VAC25-870-93 through 9VAC25-870-99 provided:
 - (1) There has been an obligation of locality, state or federal funding, in whole or in part, prior to July 1, 2012, or the department has approved a stormwater management plan prior to July 1, 2012;
 - (2) A state permit has not been issued prior to July 1, 2014; and
 - (3) Land disturbance did not commence prior to July 1, 2014.
- (D) Land-disturbing activities grandfathered under subsections (A) and (B) of this section shall remain subject to 9VAC25-870-93 through 99 technical criteria for one additional state permit cycle. After such time, portions of the project not under construction shall become subject to any new technical criteria adopted by the board.
- (E) In cases where governmental bonding or public debt financing has been issued for a project prior to July 1, 2012, such project shall be subject to the technical criteria of 9VAC25-870-93 through 99.
- (F) Nothing in this section shall preclude an operator from constructing to a more stringent standard at his discretion.
- (G) However, these applicable land-disturbing activities are also subject to more stringent City criteria effective prior to July 1, 2014. This includes the definition of "site," treating the entire Alexandria water quality volume in section 13-109(E), the pre/post-development peak flow rate requirement for the ten-year 24-hour storm event in section 13-109(F)(2), the requirements in section 13-109(F)(3), and the requirements in section 13-109(F)(7).

13-125 - Monitoring and inspections.

- (A) The director of T&ES shall inspect the land-disturbing activity during construction for compliance with this Article XIII, including but not limited to compliance with the approved erosion and sediment control plan, compliance with the approved stormwater management plan,

development, updating, and implementation of the pollution prevention plan, and development and implementation of any additional control measures necessary to address a TMDL.

- (B) The director of T&ES may, at reasonable times and under reasonable circumstances, enter any establishment or upon any property, public or private, for the purpose of obtaining information or conducting surveys or investigations necessary in the enforcement of the provisions of this Article XIII.
- (C) In accordance with a performance bond with surety, cash escrow, letter of credit, any combination thereof, or such other legal arrangement or instrument, the director of T&ES may also enter any establishment or upon any property, public or private, for the purpose of initiating or maintaining appropriate actions that are required by the permit conditions associated with a land-disturbing activity when a permittee, after proper notice, has failed to take acceptable action within a time specified.
- (D) Pursuant to Section 62.1-44.15:40 of the Code of Virginia, the director of T&ES may require every permit applicant or permittee, or any such person subject to the requirements of this Article XIII to furnish when requested such application materials, plans, specifications, and other pertinent information as may be necessary to determine the effect of the discharge on the quality of state waters, or such other information as may be necessary to accomplish the purpose of this Article XIII.
- (E) Post-construction inspections of stormwater management facilities required by the provisions of this Article XIII shall be conducted by the director of T&ES pursuant to section 13-109(G).

13-126 - Penalties.

- (A) Under the authority of 9VAC25-870-116 the director of T&ES shall have the following authority to enforce provisions of this Article XIII required or authorized under Section 62.1-44.15:24 et seq. of the Code of Virginia (the Virginia Stormwater Management Act) and its attendant regulations:
 - (1) If the director determines that there is a failure to comply with the VSMP authority permit conditions or determines there is an unauthorized discharge, notice shall be served upon the permittee or person responsible for carrying out the permit conditions by any of the following: verbal warnings and inspection reports, notices of corrective action, consent special orders, and notices to comply. Written notices shall be served by registered or certified mail to the address specified in the permit application or by delivery at the site of the development activities to the agent or employee supervising such activities.
 - (a) The notice shall specify the measures needed to comply with the permit conditions and shall specify the time within which such measures shall be completed. Upon failure to comply within the time specified, a stop work order may be issued in accordance with subsection (b) or the permit may be revoked by the director of T&ES.
 - (b) If a permittee fails to comply with a notice issued in accordance with this section within the time specified, the director of T&ES may issue an order requiring the owner, permittee, person responsible for carrying out an approved plan, or the person conducting the land-disturbing activities without an approved plan or required permit to cease all land-disturbing activities until the violation of the permit has ceased, or an approved plan and required permits are obtained, and specified corrective measures have been completed.

Such orders shall be issued in accordance with local procedures. Such orders shall become effective upon service on the person by certified mail, return receipt requested, sent to his address specified in the land records of the locality, or by personal delivery by an agent of the director of T&ES. However, if the director of T&ES finds that any such violation is grossly affecting or presents an imminent and substantial danger of causing harmful erosion of lands or sediment deposition in waters within the watersheds of the Commonwealth or otherwise substantially

impacting water quality, it may issue, without advance notice or hearing, an emergency order directing such person to cease immediately all land-disturbing activities on the site and shall provide an opportunity for a hearing, after reasonable notice as to the time and place thereof, to such person, to affirm, modify, amend, or cancel such emergency order. If a person who has been issued an order is not complying with the terms thereof, the director of T&ES may institute a proceeding for an injunction, mandamus, or other appropriate remedy in accordance with subsection (3) below.

- (2) In addition to any other remedy provided by this article, if the director of T&ES or his designee determines that there is a failure to comply with the provisions of this article, they may initiate such informal and/or formal administrative enforcement procedures in a manner that is consistent with local public facilities/engineering manuals and/or specific policy.
- (3) Any person violating or failing, neglecting, or refusing to obey any rule, regulation, ordinance, order, approved standard or specification, or any permit condition issued by the director of T&ES may be compelled in a proceeding instituted in the appropriate local court by the locality to obey same and to comply therewith by injunction, mandamus or other appropriate remedy.
- (4) Any person who violates any provision of this article or who fails, neglects, or refuses to comply with any order of the director of T&ES, shall be subject to a civil penalty not to exceed \$32,500.00 for each violation within the discretion of the court. Each day of violation of each requirement shall constitute a separate offense.
 - (a) Violations for which a penalty may be imposed under this subsection shall include but not be limited to the following:
 - (i) No state permit registration;
 - (ii) No SWPPP;
 - (iii) Incomplete SWPPP;
 - (iv) SWPPP not available for review;
 - (v) No approved erosion and sediment control plan;
 - (vi) Failure to install stormwater BMPs or erosion and sediment controls;
 - (vii) Stormwater BMPs or erosion and sediment controls improperly installed or maintained;
 - (viii) Operational deficiencies;
 - (ix) Failure to conduct required inspections;
 - (x) Incomplete, improper, or missed inspections; and
 - (xi) Discharges not in compliance with the requirements of 4FAC50-60-1170 of the general permit.
 - (b) The director of T&ES may issue a summons for collection of the civil penalty and the action may be prosecuted in the appropriate court.
 - (c) In imposing a civil penalty pursuant to this subsection, the court may consider the degree of harm caused by the violation and also the economic benefit to the violator from noncompliance.
 - (d) Any civil penalties assessed by a court as a result of a summons issued by the city shall be paid into the treasury of the city and specifically placed into the Alexandria water quality improvement fund established in section 13-110 and used for the purpose of minimizing, preventing, managing, or mitigating pollution of the waters of

the city and abating environmental pollution therein in such manner as the court may, by order, direct.

- (5) Notwithstanding any other civil or equitable remedy provided by this section or by law, any person who willfully or negligently violates any provision of this article, any order of the director of T&ES, any condition of a permit, or any order of a court shall, be guilty of a misdemeanor punishable by confinement in jail for not more than 12 months or a fine of not less than \$2,500.00 nor more than \$32,500.00, or both.
- (B) Under the authority of Section 62.1-44.15:74 of the Code of Virginia the director of T&ES shall have the following authority to enforce provisions of this Article XIII required or authorized under Section 62.1-44.15:73 of the Code of Virginia (the Chesapeake Bay Preservation Act) and its attendant regulations:
 - (1) Any person who: (i) violates any provision of this ordinance or (ii) violates or fails, neglects, or refuses to obey any final notice, order, rule, regulation, or variance or permit condition authorized under this ordinance shall, upon such finding by an appropriate circuit court, be assessed a civil penalty not to exceed \$5,000.00 for each day of violation. Such civil penalties may, at the discretion of the court assessing them, be directed to be paid into the Alexandria water quality improvement fund for the purpose of abating environmental damage to or restoring Chesapeake Bay Preservation Areas therein, in such a manner as the court may direct by order, except that where the violator is the city itself or its agent, the court shall direct the penalty to be paid into the state treasury.
 - (2) With the consent of any person who: (i) violates any provision of this ordinance related to the protection of water quality in Chesapeake Bay Preservation Areas or (ii) violates or fails, neglects, or refuses to obey any notice, order, rule, regulation, or variance or permit condition authorized under this ordinance, the city may provide for the issuance of an order against such person for the one-time payment of civil charges for each violation in specific sums, not to exceed \$10,000.00 for each violation. Such civil charges shall be paid into the city water quality improvement fund for the purpose of abating environmental damage to or restoring Chesapeake Bay Preservation Areas therein, except that where the violator is the city itself or its agent, the civil charges shall be paid into the state treasury. Civil charges shall be in lieu of any appropriate civil penalty that could be imposed under subsection (A) above. Civil charges may be in addition to the cost of any restoration required or ordered by the city.
- (C) In addition to subsections (A) and (B) above, the director of T&ES shall have the enforcement provisions available in section 11-200 of this ordinance.

(Ord. No. 4865, § 1, 3-15-14; Ord. No. 4903, § 1, 10-18-14)

Alexandria Public BMP Inspections - 2015 to 2016 MS4 Reporting Period

BMP_ID	VA SW Clearinghouse BMP Categories	Function	BMP_Address	Inspection Performed	Maintenance Result
1989-0011 SIT 01		Detention	2900 Business Center Dr.		
1995-0012 01	Filtering Practice 1	BMP	1108 Jefferson St.	6/7/2016	No Maintenance Required
1995-0012 02		Detention	1108 Jefferson St.		
1996-0019 01	Wet Pond 1	BMP	4800 Brenman Park Dr.	6/6/2016	No Maintenance Required
1996-0019 02	Manufactured Treatment Device - Hydrodynamic	BMP	4800 Brenman Park Dr.	6/6/2016	Maintenance Required
1996-0024 01	Bioretention 1	BMP	450 Andrews Ln.	5/25/2016	Maintenance Required
1997-0025 01	Bioretention 1	BMP	5005 Duke St.	5/25/2016	Maintenance Required
1997-0025 02	Bioretention 1	BMP	5005 Duke St.	5/25/2016	Maintenance Required
1997-0025 03	Bioretention 1	BMP	5005 Duke St.	5/25/2016	No Maintenance Required
1997-0025 04	Bioretention 1	BMP	5005 Duke St.	5/25/2016	No Maintenance Required
1997-0025 05	Bioretention 1	BMP	5005 Duke St.		
1997-0025 06	Bioretention 1	BMP	5005 Duke St.	5/25/2016	Maintenance Required
1997-0039 01	Manufactured Treatment Device - Hydrodynamic	BMP	900 Second St.	6/10/2016	Maintenance Required
1998-0009 01	Manufactured Treatment Device - Hydrodynamic	BMP	5650 Sanger Ave.	6/7/2016	Maintenance Required
1998-0011 01	Filtering Practice 1	BMP	3200 Business Center Dr.	6/6/2016	Maintenance Required
1998-0016 02	Extended Detention Pond 1	BMP	2009 Braddock Ct.		
2001-0014-A 01	Wet Pond 1	BMP	2901 N. Hampton Dr.	6/6/2016	Maintenance Required
2002-0005 01	Manufactured Treatment Device - Filtering	BMP	5750 Sanger Ave.	6/7/2016	No Maintenance Required
2002-0005 02	Manufactured Treatment Device - Hydrodynamic	BMP	5750 Sanger Ave.	6/7/2016	Maintenance Required
2002-0007 01	Filtering Practice 1	BMP	4251 Eisenhower Ave.	5/25/2016	Maintenance Required
2002-0016 01	Manufactured Treatment Device - Hydrodynamic	BMP	2001 Mill Rd.	6/9/2016	Maintenance Required
2002-0024 01	Filtering Practice 1	BMP	1605 Cameron St.	6/15/2016	Maintenance Required
2002-0037 01	Grass Channel	BMP	3700 Mt. Vernon Ave.	5/26/2016	Maintenance Required
2002-0070 SUP 01	Bioretention 1	BMP	3540 Wheeler Ave.	5/19/2016	Maintenance Required
2003-0016 01	Manufactured Treatment Device - Filtering	BMP	2501 Mt. Vernon Ave.	6/10/2016	Maintenance Required
2003-0016 02	Vegetated Roof 1	BMP	2501 Mt. Vernon Ave.		
2003-0027 01	Wet Pond 1	BMP	4001 Eisenhower Ave.	6/6/2016	Maintenance Required
2004-0038 01		BMP	3700-3721 Taft Ave.		
2005-0022 01	Manufactured Treatment Device - Filtering	BMP	901 Wythe St.	6/9/2016	Maintenance Required
2005-0022 02	Manufactured Treatment Device - Filtering	BMP	901 Wythe St.	6/9/2016	No Maintenance Required
2005-0022 03	Urban Bioretention	BMP	901 Wythe St.	6/9/2016	Maintenance Required
2005-0022 04	Vegetated Roof 1	BMP	901 Wythe St.	6/9/2016	Maintenance Required
2005-0810 BLD 01	Vegetated Roof 1	BMP	4480 King St.	6/8/2016	Maintenance Required
2006-0025 01	Extended Detention Pond 1	BMP	3000 Business Center Dr.	5/23/2016	Maintenance Required

Alexandria Public BMP Inspections - 2015 to 2016 MS4 Reporting Period

BMP_ID	VA SW Clearinghouse BMP Categories	Function	BMP_Address	Inspection Performed	Maintenance Result
2006-0025 02	Urban Bioretention	BMP	3000 Business Center Dr.	5/19/2016	No Maintenance Required
2006-0025 03	Urban Bioretention	BMP	3000 Business Center Dr.	5/19/2016	No Maintenance Required
2006-0025 04	Urban Bioretention	BMP	3000 Business Center Dr.	5/19/2016	No Maintenance Required
2006-0101 01	Urban Bioretention	BMP	4801 Duke St.	5/26/2016	Maintenance Required
2006-0101 02	Urban Bioretention	BMP	4801 Duke St.	5/26/2016	Maintenance Required
2006-0101 03	Urban Bioretention	BMP	4801 Duke St.	5/26/2016	Maintenance Required
2007-0014 01	Manufactured Treatment Device - Hydrodynamic	BMP	2700 Witter Dr.	5/20/2016	Maintenance Required
2007-0014 02	Manufactured Treatment Device - Hydrodynamic	BMP	2700 Witter Dr.	5/20/2016	Maintenance Required
2007-0016 PLT 01	Manufactured Treatment Device - Filtering	BMP	4421 W. Braddock Rd.	6/13/2016	No Maintenance Required
2007-0037 01	Sheetflow to Vegetated Filter or Conserved Open Space 1	BMP	3534 Wheeler Ave.	5/26/2016	Maintenance Required
2007-0037 02	Bioretention 1	BMP	3534 Wheeler Ave.	5/20/2016	Maintenance Required
2007-0037 03	Bioretention 1	BMP	3534 Wheeler Ave.	5/23/2016	Maintenance Required
2007-0037 04	Bioretention 1	BMP	3534 Wheeler Ave.	5/23/2016	Maintenance Required
2007-0037 05	Bioretention 1	BMP	3534 Wheeler Ave.	5/23/2016	Maintenance Required
2007-0037 06	Bioretention 1	BMP	3534 Wheeler Ave.	5/20/2016	Maintenance Required
2007-0037 07	Rainwater Harvesting	BMP	3534 Wheeler Ave.		
2007-0101 01	Urban Bioretention	BMP	3554 Valley Dr.	5/26/2016	Maintenance Required
2007-0101 02	Urban Bioretention	BMP	3500 Valley Dr.	5/26/2016	Maintenance Required
2007-0102 01	Vegetated Roof 1	BMP	213 E Windsor Ave	6/15/2016	Maintenance Required
2008-0012 01	Manufactured Treatment Device - Hydrodynamic	BMP	133 S. Quaker Ln.	5/9/2016	Maintenance Required
2008-0012 02	Manufactured Treatment Device - Hydrodynamic	BMP	133 S. Quaker Ln.	5/9/2016	Maintenance Required
2008-0012 03	Manufactured Treatment Device - Hydrodynamic	BMP	133 S. Quaker Ln.	5/9/2016	Maintenance Required
2008-0012 04	Manufactured Treatment Device - Filtering	BMP	3200 Business Center Dr.		
2008-0012 05		Detention	133 S. Quaker Ln.	5/19/2016	No Maintenance Required
2008-0018 PLT 01	Manufactured Treatment Device - Filtering	BMP	5261 Eisenhower Ave.	6/13/2016	Maintenance Required
2008-0101 01	Urban Bioretention	BMP	4550 N. Pegram St.	6/8/2016	Maintenance Required
2008-0101 02	Urban Bioretention	BMP	4550 N. Pegram St.	6/8/2016	Maintenance Required
2008-0102 01	Manufactured Treatment Device - Hydrodynamic	BMP	2601 Cameron Mills Rd.	6/7/2016	Maintenance Required
2009-0013 01	Sheetflow to Vegetated Filter or Conserved Open Space 1	BMP	1001 S. Washington St.	6/7/2016	Maintenance Required
2009-0101 01	Vegetated Roof 1	BMP	301 King St.	6/10/2016	No Maintenance Required

Alexandria Public BMP Inspections - 2015 to 2016 MS4 Reporting Period

BMP_ID	VA SW Clearinghouse BMP Categories	Function	BMP_Address	Inspection Performed	Maintenance Result
2009-0101 02	Vegetated Roof 1	BMP	301 King St.	6/9/2016	Maintenance Required
2010-0005 GRD 01	Sheetflow to Vegetated Filter or Conserved Open Space 1	BMP	3315 Landover St.	6/7/2016	No Maintenance Required
2010-0005 GRD 02	Sheetflow to Vegetated Filter or Conserved Open Space 1	BMP	3315 Landover St.	6/7/2016	Maintenance Required
2010-0018 GRD 01	Bioretention 1	BMP	1&7 E. Del Ray Ave.	6/10/2016	Maintenance Required
2011-0008 01	Urban Bioretention	BMP	3000 Business Center Dr.	5/23/2016	No Maintenance Required
2011-0008 02	Urban Bioretention	BMP	3000 Business Center Dr.	5/23/2016	Maintenance Required
2011-0033 01	Manufactured Treatment Device - Filtering	BMP	5261 Eisenhower Ave.	6/13/2016	No Maintenance Required
2011-0033 02	Manufactured Treatment Device - Filtering	BMP	5261 Eisenhower Ave.	6/13/2016	Maintenance Required
2011-0033 03	Manufactured Treatment Device - Hydrodynamic	BMP	5261 Eisenhower Ave.	6/13/2016	Maintenance Required
2011-0033 04		Detention	5261 Eisenhower Ave.	6/13/2016	Maintenance Required
2012-0013 01 GRD	Urban Bioretention	BMP	2209 Ivor Lane	6/8/2016	Maintenance Required
2012-0101 01	Urban Bioretention	BMP	101 Cedar St.	5/23/2016	Maintenance Required
2012-0102 01	Manufactured Treatment Device - Filtering	BMP	Intersection of Seminary Rd. & N. Beauregard St.	6/6/2016	Maintenance Required
2012-0102 02	Manufactured Treatment Device - Filtering	BMP	Intersection of Seminary Rd. & Mark Center Ave.	6/6/2016	Maintenance Required
2012-0102 03	Manufactured Treatment Device - Filtering	BMP	Intersection of Seminary Rd. & Mark Center Ave.	6/6/2016	No Maintenance Required
2012-0103 01	Manufactured Treatment Device - Filtering	BMP Retrofit	4609 Seminary Rd.	6/8/2016	Maintenance Required
2012-0103 02	Manufactured Treatment Device - Filtering	BMP Retrofit	4609 Seminary Rd.	6/8/2016	Maintenance Required
2012-0103 03	Rainwater Harvesting	BMP Retrofit	4609 Seminary Rd.	6/8/2016	Maintenance Required
2012-0103 04	Rainwater Harvesting	BMP Retrofit	4609 Seminary Rd.	6/8/2016	No Maintenance Required
2012-0103 05	Rainwater Harvesting	BMP Retrofit	4609 Seminary Rd.	6/8/2016	No Maintenance Required
2012-0121 01	Bioretention 1	BMP	4109 Mt Vernon Ave	6/10/2016	Maintenance Required
2012-0121 02	Bioretention 1	BMP	4109 Mt. Vernon Ave	6/10/2016	Maintenance Required
2012-0383 PRJ 01	Bioretention 1	BMP	1001 Jefferson St.	6/7/2016	Maintenance Required
2012-0383 PRJ 02	Sheetflow to Vegetated Filter or Conserved Open Space 1	BMP	1001 Jefferson St.	6/7/2016	Maintenance Required
2014-0101 01	Urban Bioretention	BMP	Jefferson Davis Highway	6/15/2016	No Maintenance Required
2014-0101 02	Urban Bioretention	BMP	Jefferson Davis Highway	6/15/2016	Maintenance Required
2014-0101 03	Urban Bioretention	BMP	Jefferson Davis Highway	6/15/2016	Maintenance Required
2014-0101 04	Urban Bioretention	BMP	Jefferson Davis Highway	6/15/2016	Maintenance Required
2014-0101 05	Urban Bioretention	BMP	Jefferson Davis Highway	6/15/2016	Maintenance Required
2014-0101 06	Urban Bioretention	BMP	Jefferson Davis Highway	6/15/2016	Maintenance Required
2014-0101 07	Urban Bioretention	BMP	Jefferson Davis Highway	6/15/2016	Maintenance Required

Facility ID	BMP Type	BMP Address	Inspection Performed	Inspection Results	Type of Maintenance	Maintenance Completion Date	Corrective Action Letter	Notice to Comply
1996-0002	Stormceptor	99 Franklin St	11/13/2015	No Maintenance Required	N/A			
1996-0016 01	DVSF	2700 Willamsburg St	3/1/2016	Maintenance Required	Pump needs to be fixed to pump water out	5/9/2016		
1996-0016 02	DVSF	2700 Willamsburg St	3/1/2016	No Maintenance Required	N/A			
1996-0016 03	DVSF	2700 Willamsburg St	3/1/2016	No Maintenance Required	N/A			
1996-0016 04	Stormceptor	2700 Willamsburg St	3/1/2016	Maintenance Required	Remove sediment	3/23/2016		
1996-0016 05	Stormceptor	2700 Willamsburg St	3/1/2016	Maintenance Required	Remove sediment	3/23/2016		
1997-0021 SIT	Isolater	5311 Duke St	2/12/2016	Maintenance Required	Remove trash and sediment	4/22/2016		
2000-0039	CDS	4700 Eisenhower Ave	11/25/2015	No Maintenance Required	N/A			
2001-0020 03	Stormceptor	4320 Seminary Rd	11/13/2015	No Maintenance Required	N/A			
2001-0020 04	Stormceptor	4320 Seminary Rd	11/13/2015	No Maintenance Required	N/A			
2001-0020 05	Stormceptor	4320 Seminary Rd	11/13/2015	No Maintenance Required	N/A			
2002-0044 01	Dwnstrm Def	3300 King St	12/4/2015	Maintenance Required	Remove trash and sediment	3/1/2016		
2002-0044 02	Dwnstrm Def	3300 King St	12/4/2015	Maintenance Required	Remove trash and sediment	3/1/2016		
2002-0044 03	Dwnstrm Def	3300 King St	12/4/2015	Maintenance Required	Remove trash and sediment	3/1/2016		
2002-0044 04	Dwnstrm Def	3300 King St	12/4/2015	Maintenance Required	Remove trash and sediment	3/1/2016		
2002-0044 05	StormFilter	3300 King St	12/4/2015	Maintenance Required	Change filter in cartridge bay	3/1/2016		
2002-0044 06	Bioretention	3300 King St	12/4/2015	Maintenance Required	Mulch, remove sediment from curb cut	3/1/2016		
2002-0044 07	Cistern	3300 King St	12/4/2015	No Maintenance Required	N/A			
2002-0048 01	Aquaswirl	3500 Goddard Way	12/14/2015	No Maintenance Required	N/A			
2002-0048 02	Aquaswirl	3500 Goddard Way	12/14/2015	No Maintenance Required	N/A			
2003-0007	CDS	206 N Quaker	2/29/2016	No Maintenance Required	N/A			
2003-0010	ACSF	1900 Jamieson Ave	2/29/2016	No Maintenance Required	N/A			
2003-0035	StormFilter	4380 King St	2/29/2016	No Maintenance Required	N/A			
2003-0039 01	DVSF	2930 Eisenhower Ave	3/1/2016	No Maintenance Required	N/A			
2003-0041	ACSF	2050 Jamieson Ave	6/1/2016	Maintenance Required	Check pump and filter material			
2003-0042 01	Aquaswirl	34 Arell Ct	3/24/2016	No Maintenance Required	N/A			
2003-0042 02	Aquaswirl	34 Arell Ct	5/25/2016	No Maintenance Required	N/A			
2004-0001	Aquaswirl	1115 Cameron St	12/14/2015	No Maintenance Required	N/A			
2004-0010	StormFilter	6100 Lincolnia Rd	12/14/2015	No Maintenance Required	N/A			
2004-0013	CDS	517 S General Washington St	11/25/2015	Maintenance Required	Remove sediment	3/13/2016	2/3/2016	
2004-0014 01	Catch Basin SF	1301 N Van Dorn St	3/24/2016	No Maintenance Required	N/A			
2004-0014 02	Catch Basin SF	1301 N Van Dorn St	3/24/2016	No Maintenance Required	N/A			
2004-0014 03	Aquaswirl	1301 N Van Dorn St	3/24/2016	No Maintenance Required	N/A			
2004-0018 01	StormFilter	520 N Armistead St	3/24/2016	No Maintenance Required	N/A			
2004-0018 02	StormFilter	520 N Armistead St	3/24/2016	No Maintenance Required	N/A			
2004-0019	DC Sand Filter	1001 Bernard St	1/7/2016	No Maintenance Required	N/A			
2004-0020	Delaware Sand Fi	1720 W Braddock Rd	4/22/2016	No Maintenance Required	N/A			
2004-0021	Delaware Sand Fi	S Reynolds St	6/1/2016	No Maintenance Required	N/A			
2004-0022 01	DC Sand Filter	323 S Whiting St	6/2/2016	Maintenance Required	Remove debris and sediment		8/16/2016	
2004-0025 01	D.C. Sandfilter	4513 Duke St	4/26/2016	No Maintenance Required	N/A			
2004-0032 01	Stormceptor	557 S Van Dorn St	11/16/2015	Maintenance Required	Uncover BMP	2/16/2016	2/3/2016	
2004-0032 02	Filterra	557 S Van Dorn St	11/16/2015	Maintenance Required	Remove trash and sediment	2/16/2016	2/3/2016	
2004-0032 03	Filterra	557 S Van Dorn St	11/16/2015	Maintenance Required	Remove trash and sediment	2/16/2016	2/3/2016	
2004-0041	Aquaswirl	2321 Mill Rd	4/5/2016	No Maintenance Required	N/A			
2005-0003 01	Stormceptor	4320 Seminary Rd	11/13/2015	Maintenance Required	Remove trash and sediment	11/27/2015		
2005-0003 02	Stormceptor	4320 Seminary Rd	11/13/2015	No Maintenance Required	N/A			
2005-0011 01	StormFilter	2345 Mill Rd	4/6/2016	Maintenance Required	Remove sediment	7/27/2016		
2005-0011 02	StormFilter	2345 Mill Rd	4/6/2016	Maintenance Required	Replace Filter	7/27/2016		
2005-0015	Alexandria Comp	2050 Ballenger Ave	4/26/2016	No Maintenance Required	N/A			
2005-0016	CDS	1300 Duke St	11/18/2015	Maintenance Required	remove bricks and floatables	4/25/2016	2/3/2016	
2005-0024	Stormceptor	900 N Washington St	11/16/2015	No Maintenance Required	N/A			
2005-0028	ACSF	1920 Ballenger Ave	6/1/2016	Maintenance Required	Check pump and filter material	7/28/2016		
2005-0041	StormFilter	3051 Mt Vernon Ave	6/7/2016	Maintenance Required	Remove sediment, replace filter	7/19/2016		

Facility ID	BMP Type	BMP Address	Inspection Performed	Inspection Results	Type of Maintenance	Maintenance Completion Date	Corrective Action Letter	Notice to Comply
2006-0012 01	Aquaswirl	800 John Carlyle St	5/24/2016	Maintenance Required	Remove trash and sediment			
2006-0012 02	Aquaswirl	800 John Carlyle St	5/24/2016	Maintenance Required	Remove trash and sediment			
2006-0023	CDS	1701 Duke St	12/2/2015	No Maintenance Required	N/A			
2007-0004 01 PLT	Aquaswirl	2000 Eisenhower Ave	12/18/2015	Maintenance Required	Remove trash and sediment	1/12/2016		
2007-0004 02 PLT	Aquaswirl	2001 Eisenhower Ave	12/18/2015	Maintenance Required	Remove trash and sediment	1/12/2016		
2007-0004 03 PLT	Aquaswirl	2002 Eisenhower Ave	12/18/2015	Maintenance Required	Remove trash and sediment	1/12/2016		
2007-0008	Stormceptor	1901 Jamieson Ave	6/1/2016	Maintenance Required	Remove trash and sediment			
2007-0013	BaySeparator	2400 Russell Rd	6/2/2016	No Maintenance Required	N/A			
2007-0025 01	StormFilter	2950 Eisenhower Ave	6/1/2016	Maintenance Required	Remove sediment	8/4/2016	8/12/2016	
2007-0025 02	Permeable Paver	2950 Eisenhower Ave	6/1/2016	No Maintenance Required	N/A			
2009-0014 GRD 01	Filterra	3801 W. Braddock Rd	6/14/2016	Maintenance Required	Remove trash and replace mulch			
2009-0014 GRD 02	Filterra	3801 W. Braddock Rd	6/14/2016	Maintenance Required	Remove trash and replace mulch			
2009-0014 GRD 03	Filterra	3801 W. Braddock Rd	6/14/2016	Maintenance Required	Remove trash and replace mulch			
2009-0014 GRD 04	Filterra	3801 W. Braddock Rd	6/14/2016	Maintenance Required	Remove trash and replace mulch			
2011-0003	StormFilter	898 N Alfred St	6/10/2016	Maintenance Required	Remove sediment and check filter		8/12/2016	
2011-0020	Stormceptor	3510 Duke St	6/13/2016	No Maintenance Required	N/A			
2002-0006 01	Bioretention	323 S Fairfax St	6/28/2016	No Maintenance Required	N/A			
2002-0006 02	Bioretention	323 S Fairfax St	6/28/2016	No Maintenance Required	N/A			
1997-0002	Bioretention	5480 Bradford Ct	6/28/2016	Maintenance Required	Remove weeds and mulch			
2009-0008 01	Tree Box Planter	701 N Columbus St	6/28/2016	Maintenance Required	Mulch, plant plantings per plan			
2009-0008 02	Tree Box Planter	701 N Columbus St	6/28/2016	Maintenance Required	Mulch, plant plantings per plan			
2004-0025 02	CDS	4513 Duke St	4/26/2016	Maintenance Required	Remove trash and sediment	6/24/2016		
2004-0025 03	CDS	4513 Duke St	4/26/2016	Maintenance Required	Remove trash and sediment	6/24/2016		

Number of Inspections Compelled: 76

Number of Enforcement Actions: 0

Appendix F – Minimum Control Measure #6

1. Environmental Industrial Unit Sample Agenda
2. Water Quality Steering Committee Sample Agenda
3. Water Quality Work Group Sample Agenda
4. Report a Problem Internal System capture
5. Illicit Discharge Staff Training Sign In Sheets

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**Environmental Industrial Group Meeting
November 24, 2015**

Agenda

1. Case Briefings

- 7/31/15 – Cutting and removal of tank inside residence with no permits, 224 Wesmond Dr – 1 arrest
- 8/19/15 – Multiple complaints of dust from bridge project, 4600 block Duke Street. Referred to TES.
- 8/27/15 – Illegal dumping of paints, 3224 Colvin St
- 9/23/15 – Dumping of waste oil approx. 50 gallons, Don Pablos, 3525 Jefferson Davis Hwy – 1 arrest
- 10/16/15 – Hydraulic oil spill approx. 100 gallons from West St to Princess St behind Jefferson Houston School.
- 10/16/15 – Illegal dumping of used oil filters (over 200), Bradlee Shopping Center 3600 block King St.
- 11/3/15 – Complaint of discharge of contaminated water from construction site 220 S. Union St. DEQ permit for dewatering was obtained.
- 11/18/15 – Complaint of odors and possible auto repair and illegal spray painting, 416 Hume Ave. NOV issued.
- 11/18/15 – 401 Swann Ave, possible illegal auto repair and numerous vehicles with expired tags.
- 11/20/15 – Sweet Fire Donnas – chemical leaking into underground garage.
- Report of a white substance into Hooffs Run Creek – investigated with OEQ and Haz Mat 209. Determined this was a combination system drain overflow into the creek. No actions needed.
- Episcopal High School – Report about a sheen in the pond. Walked the area and identified 3 sources of grease and hydraulic spills. Re-inspection scheduled this week.
- Multiple cases of gas line ruptures from contractors in Oct./Nov – 3 arrests

2. Significant Facility Updates

- 10/25/15 – Auto accident and slick roadway in front of Convanta. Road continues to get slick due to residue coming from vehicles exiting trash unloading bay. On-going issue.

3. Department briefings and comments

- Notification and distribution of DEQ permits.



Transportation and Environmental Services
301 King Street, City Hall
www.alexandriava.gov Alexandria, VA 22314

Phone: 703-746-4065
Fax: 703-519-8354

Agenda
Water Quality Steering Committee Meeting
October 27, 2015
2:00 – 3:30 p.m.
CH Chet & Sabra Avery Conference Room 2000

1. CSO Long Term Control Plan (LTCP) Update
 - a. Formation of Stakeholder Group
 - b. Future Meeting Topics and Issues
2. Final Lake Cook Costs and Features Options Memo
3. MS4 Update
 - a. WEF/EPA City MS4 Award
 - b. FY2015 Annual Report Submitted
 - c. FY2015 Program Plan Update Submitted
 - i. Chesapeake Bay TMDL 5% Action Plan
4. Other Items



Transportation and Environmental Services
301 King Street, City Hall
www.alexandriava.gov Alexandria, VA 22314

Phone: 703-746-4065
Fax: 703-519-8354

Agenda
Water Quality Work Group Meeting
June 14, 2016
03:30 – 5:00 p.m.
CH Sister Cities 1101

1. Pocket Parks Presentation & Discussion (Dana Wedeles, RPCA)
2. Lake Cook Group Update
 - 60% design submitted
3. Ben Brenman Pond Group Update
 - Initial concept design submitted
4. Stormwater Utility Project Phase 1 Group Update

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AlexNet

Home > Report a ProblemTuesday, June 28, 2016

Print  Text Size    Resources 

WELCOME, Joni

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 My Mail & Calendar

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Communications & Public Information

Community

Departments & Offices

Emergency Preparedness

Employee Retirement and Pensions

Forms

GIS & Maps

How Do I?

Meeting Dockets & Video

Phones & Phone Numbers

Promotional Opportunities

Room Scheduler

Training & Development

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[Public Works & Buildings](#)

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For problems with City websites, web applications, etc., email web_team@alexandriava.gov or call 703.746.3966.

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Transportation & Environmental Services – City of Alexandria, VA
 Training Roster and Lesson Plan

Page ____ of ____

TOPIC OF TRAINING: RECOGNIZING AND REPORTING ILLICIT DISCHARGES		DATE OF TRAINING: 5/17/2016	
NAME OF LEAD TRAINER: JESSE MAINES		NAME OF ASSISTING TRAINER: WISDOM GBEDIAME	
SIGNATURE OF LEAD TRAINER:		SIGNATURE OF ASSISTING TRAINER:	
TITLE OF LEAD TRAINER: DIVISION CHIEF		TITLE OF ASSISTING TRAINER: WATER QUALITY COMPLIANCE SPECIALIST	
LESSON PLAN ELEMENTS	Presentation and Videos		
TRAINEE "PRINTED" NAME	TRAINEE "SIGNATURE"	DIVISION NAME	
Anthony Tillman	Anthony Tillman	TES	
John Taylor	John Taylor	TES	
FRANCISCO DOMINGUEZ	Francisco Dominguez	TES	
John Taylor	John Taylor	DPW	
JEANELLE ALLEN	Jeanelle Allen	TES	
Isidro Davila	Isidro Davila	TES	
J. Beranuder	J. Beranuder	TES	
Raymond morik	Raymond morik	TES	
K. Venter	K. Venter	TES	
Br. Lawrence	Br. Lawrence	TES	
Dwayne Pugh	Dwayne Pugh	TES	
Tim Doherty	Tim Doherty	TES	
Melvin Entwistle Jr	Melvin Entwistle Jr	TES	

Transportation & Environmental Services – City of Alexandria, VA
 Training Roster and Lesson Plan

Page ____ of ____

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SIGNATURE OF LEAD TRAINER:		SIGNATURE OF ASSISTING TRAINER:	
TITLE OF LEAD TRAINER: DIVISION CHIEF		TITLE OF ASSISTING TRAINER: WATER QUALITY COMPLIANCE SPECIALIST	
LESSON PLAN ELEMENTS	Presentation and Videos		
TRAINEE "PRINTED" NAME	TRAINEE "SIGNATURE"	DIVISION NAME	
Thomas Knighton	Thomas Knighton	Public works	
Rider Hernandez	[Signature]	Public works	
John Nicodemus	[Signature]	Public Works	
Harold Shaw	Harold Shaw	PWD streets	
Frankie Williams	Frankie Williams	TES - Maint	
William Jones	William Jones	TES	
Michael Haynes	[Signature]	TES Maint	
MICHAEL DOWNING	[Signature]	TES PWSewer	
DEREK CLAYTOR	[Signature]	PWS SEWER	
Terry Stanley	[Signature]	PWS sewer	
Anthony Foster	[Signature]	TES / Hippo	
Mike Clem	[Signature]	Reson Rec.	
Larry Thompson	[Signature]	TES Streets	
Karen Giuseppe	Karen Giuseppe	TES Operations	

Transportation & Environmental Services – City of Alexandria, VA
 Training Roster and Lesson Plan

Page _____ of _____



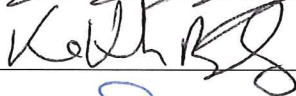

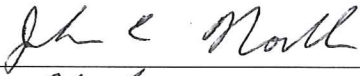
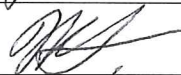
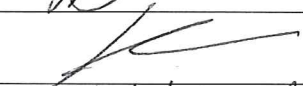
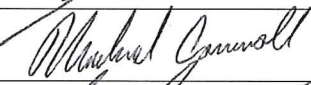


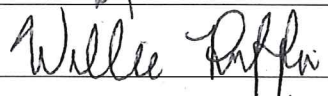
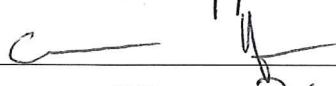
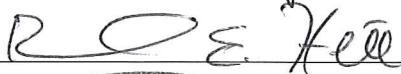


TOPIC OF TRAINING: RECOGNIZING AND REPORTING ILLICIT DISCHARGES		DATE OF TRAINING: 5/17/2016
NAME OF LEAD TRAINER: JESSE MAINES		NAME OF ASSISTING TRAINER: WISDOM GBEDIAME
SIGNATURE OF LEAD TRAINER:		SIGNATURE OF ASSISTING TRAINER:
TITLE OF LEAD TRAINER: DIVISION CHIEF		TITLE OF ASSISTING TRAINER: WATER QUALITY COMPLIANCE SPECIALIST
LESSON PLAN ELEMENTS	Presentation and Videos	
TRAINEE "PRINTED" NAME	TRAINEE "SIGNATURE"	DIVISION NAME
Arthur Byrd	Arthur Byrd	TEST PWS
George K Martin	George K Martin	TEST
Charles Hughes	Charles Hughes	TES
Bernard Baults	BB	TES
Guillermo Paz	G.P	TES
Flores Gomez	Signature	TES
Randy Peters	Randy Peters	TES
Mark Johnson	Mark Johnson	TES
Andrew Smith	Andrew Smith	MAINTENANCE
Cornelius Hawkins	Signature	TES
Rob McGuire	Signature	D.P.I.
Brian Whiteley	Signature	DPI
Jose Gil	Jose A. Gil	TES.
DOLORES REYES	Signature	TES
Carlos Arroyo	Signature	TES

Page _____ of _____

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Transportation & Environmental Services – City of Alexandria, VA
Training Roster and Lesson Plan

Page ____ of ____

TOPIC OF TRAINING: RECOGNIZING AND REPORTING ILLICIT DISCHARGE		DATE OF TRAINING: 6/8/2016
NAME OF LEAD TRAINER: JESSE MAINES		NAME OF ASSISTING TRAINER: SARA DeGROOT
SIGNATURE OF LEAD TRAINER:		SIGNATURE OF ASSISTING TRAINER:
TITLE OF LEAD TRAINER: DIVISION CHIEF		TITLE OF ASSISTING TRAINER: CIVIL ENGINEER III/SENIOR ENVIRONMENTAL SPECIALIST
LESSON PLAN ELEMENTS	Presentation and videos	
TRAINEE "PRINTED" NAME	TRAINEE "SIGNATURE"	DIVISION NAME
Dan Roush		RPCA / ParkOps.
Brian Batony		RPCA
Keith Brasley		RPCA
William Douglas		RPCA
John Noelle		RPCA
Manoel Gomez		RPCA
Jorge Guzman		RPCA
Michael Carroll		RPCA
Bradley Alger		RPCA
ANTHONY Q. MAYES		P+Rec
Willie Ruffin		Parks+Rec
Andrew Farmer		RPCA
Rose E. Hill		RPCA
Charles Brown		RPCA
Michael Reid JR		RPCA

Page _____ of _____

TES-Form-020 Initial

Page _____ of _____

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ALEXANDRIA DEPARTMENT OF CODE ADMINISTRATION
301 King Street, suite 4200 Alexandria, Virginia 22314
TRAINING ATTENDANCE ROSTER

Course: Stormwater Management

Date: 4/18/16

Instructor(s) Jesse Maines and Sara DeGroot

Location of Course: 301 King Street, Alexandria, Virginia 22314 Length of Course: 1 hour

Attendees are declaring by their signature that they have attended the above-described training. Illegible names will not be credited for training hours. Please print your name as it should appear on any certificate or legal document.

Printed Name (legal name)	Signature	Department
1 Michelle Ward		Code
2 Lanna Bradford		Code
3 JOE BLETHER		CODE
4 Paul Mitchell		Code
5 ADAM WARD		Code
6 Ray Dickel		Code
7 MARTIN O. WALSH		CODE
8 IRV KERRY		---
9 Bill Ertunen		Code
10 Mike Christensen		Code
11 Adrian Mint		Code
12 J.B. Mitchell		New Center
13 Mark Dwayne		Code
14 DAVID DEMAREE		Code
15 Donald DEMAREE		code

This roster is being submitted to the Department of Housing and Community Development as a true record of training for the above listed individuals. I have monitored this class and do hereby state that all the above listed individuals were in attendance.

Chris Evans
Printed Name

Signature

Code Administration
Department



ALEXANDRIA DEPARTMENT OF CODE ADMINISTRATION
301 King Street, suite 4200 Alexandria, Virginia 22314
TRAINING ATTENDANCE ROSTER

Course: Stormwater Management

Date: 4/18/16

Instructor(s) Jesse Maines and Sara DeGroot

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	Printed Name (legal name)	Signature	Department
1	Brian Paige		Code Admin
2	DAVE VANBURE		Code Admin
3	Chris Evans		Code Admin
4	lei Fei		Code Admin
5	TONY MENSILVA		FIRE MARSHAL
6	Michael T Johnson		Code Admin
7	Russell Furr		Fire
8	Charles Cooper		Code Admin
9			
10			
11			
12			
13			
14			
15			

This roster is being submitted to the Department of Housing and Community Development as a true record of training for the above listed individuals. I have monitored this class and do hereby state that all the above listed individuals were in attendance.

Chris Evans

Printed Name

Signature

Code Administration
 Department



Eco-CITY  ALEXANDRIA

